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ABSTRACT

The field tested fifth grade unit was designed to develop the learner's awareness of the components of the world of work, both individually and collectively through classroom simulations. The six lessons cover physical demands, physical demands and the world of work, environmental working conditions, working conditions and the world of work, physically hazardous working conditions, and the worker's world. An introduction for the instructor planning to teach the unit includes a unit content/strategy profile and a unit resource profile. The unit requires 10 hours and 35 minutes and includes large and small group activities. Each lesson is presented under the headings of: concept, performance objectives, new vocabulary introduced, resources required, instructor preparation tasks, instructional procedures (introduction, tasks, summary), assessment procedures and tools, and worksheets. An instructional strategy guide covering demonstrations, discussions, and questioning; supplementary activities for lesson 2 and a five-item bibliography are appended. (BP)

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THE WORKER'S WORLD

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FIFTH GRADE

Principal Writer: Barbara Hansen

CE 004 719

CAROLYN WARNER, SUPERINTENDENT
ARIZONA STATE DEPARTMENT OF EDUCATION

1975

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Studies over the past five years within Arizona show parents as the most influential sources of the student's occupational and educational choices. Because of parent influence and the community interest in career education, it is strongly recommended that the content of this unit be reviewed with parent advisory groups.

THE WORKERS WORLD

This instructional unit, which relates to the Arizona Career Education outcomes, has been field tested in the State of Arizona. A detailed report of the field test results is available upon request.

This unit is a suggested procedure. Future users of the unit should review the unit in its entirety paying particular attention to the content of each activity and noting when, during their teaching year, it is best to be taught. Feel free to adapt it to meet the needs of your particular students and situation.

The following are suggestions made by the field test teachers:

Check difficulty level of the Math for your situation particularly Lessons 3 and 5.

CAREER EDUCATION RATIONALE

"Reinforcing the three R's - relevance through Career Education" is the refrain echoing across the country today.

Career Education combines the academic world with the world of work. It must be available at all levels of education from kindergarten through the university. A complete program of Career Education includes awareness of the world of work, broad exploration of occupations, in-depth exploration of selected clusters, and career preparation for all learners. This calls for all basic educational subjects to incorporate Career Education as the major activity throughout the curriculum.

GOALS OF CAREER EDUCATION

LEARNING TO LIVE - means promoting the learners' awareness of their capabilities and developing their ability to deal with leisure time and society in general.

LEARNING TO LEARN - involves motivating the learners so that they want to learn the basic educational subjects. This can be done by making the subject meaningful and by relating them to the real world of work.

LEARNING TO MAKE A LIVING - means preparing learners so that they have the capability to support themselves economically and to become productive members of the community.

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UNIT DESIGN

OVERALL PURPOSE

This instructional unit will become an integral part of a total K-12 career education curriculum. This unit has been developed to afford the instructor maximum flexibility in its utilization. When planning for the use of this unit, it will be helpful for the instructor to give attention to the following characteristics.

GOALS

The unit goals of this career education unit are stated expectations toward which the instruction/learning effort is directed. It is intended that these unit goals be implicit in the total curriculum and also consistent with the accepted maturation patterns of learners.

PERFORMANCE OBJECTIVES

The performance objectives are derived from the unit goals and are intended to specify the expected behavior of the learners.

LESSONS

The lessons will help the instructor meet the performance objectives and are designed to assist learners in understanding how present experiences relate to past and future ones. The lessons are broken down into several parts. Before the main body of the lessons are described, key items are presented: the concepts, the estimated time for delivering the lesson, the vocabulary introduced, the resources required, and the instructor preparation tasks.

The instructor procedures are presented in three sections:

> INTRODUCTION. This section provides continuity within the unit and makes the learners aware of what they are to accomplish, how they will accomplish it, and why they are studying the particular concepts of the lesson.
>
> TASKS. This section provides a detailed description of the content and activities used to deliver the specified outcomes. An attempt has been made to ensure that the activities are learner-oriented, free from irrelevancies, interesting, presented in small, sequential steps, and complete. Each lesson includes tasks which allow the learners to practice the desired outcome. Sample questions and responses are provided along with suggestions to the instructor for accomplishing the task.
>
> SUMMARY. This section provides closure on the lesson and, if possible, a culminating activity for the learners. It also provides transition from one lesson to another.

On occasion, supplemental activities are presented to assist in obtaining the desired learner outcomes.

RESOURCES

Instructional resources (materials, equipment, and/or persons) are suggested in the lesson. These resources have been designed and developed so that an instructor may deliver the lessons with minimal preparation time. Worksheets are prepared so that an instructor need only take the page in the unit and use it with an opaque projector or prepare a transparency or ditto master. A *Unit Resource Profile* has been prepared and is provided in the early part of the unit. Materials used in a lesson are located at the end of that lesson.

ASSESSMENT PROCEDURES

The purpose of the assessment procedures is to determine the learners' level of achievement of the performance objectives. The descriptions, directions, and keys to all items are presented along with the lesson description. Assessment items are placed directly after the lessons, but before any worksheets. This will allow the instructor to administer the assessment items(s) after each lesson.

However, it is proposed that the items be grouped and administered as follows:

Lessons 1, 2	(15 minutes)
Lessons 3, 4	(15 minutes)
Lesson 5	(10 minutes)
Lesson 6	(10 minutes)

Most of the items may be used to preassess learners before they begin the unit if the instructor desires.

INSTRUCTIONAL STRATEGY GUIDES

The unit contains three types of instructional strategies: demonstration, discussion, and questioning. Instructor guides for these strategies are presented in Appendix A, with specific resources given in the lessons. A *Unit Content Strategy Profile*, which is also a quick reference to the strategies used in each lesson, is provided in the front part of this unit.

UNIT OVERVIEW

PURPOSE OF THIS UNIT

The primary intent of this unit is to develop awareness of the components of the world of work. The learners will be made aware of these components, both individually and collectively, through classroom simulation.

The major topics included in this unit stress the physical demands and the working conditions which may be found in occupations. The learners will examine the physical demands of present-day occupations through brief classroom simulations. The working conditions are also experienced through classroom simulations and discussed in detail. Throughout the unit the physical demands and working conditions are linked to the occupations and the tasks of the occupations which required the physical demands and the working conditions.

The final application of the unit is demonstrated by the learners as they compose an illustration of a realistic, occupational situation in preparation for entrance into the *Worker's World.*

INTENDED USE OF THIS UNIT

This unit was developed by experienced classroom instructors and reviewed by curriculum personnel not associated with its development. It represents only an early developmental effort. It is anticipated that the unit will be extensively revised based on data collected through classroom utilization. In order for useful revision data to be collected, it is essential that the unit be taught in a manner consistent with the developer's intent.

GRADE PLACEMENT

Fifth grade

SUBJECT AREA

Language Arts

DURATION

Ten hours and 35 minutes

GROUPING

Large and small

PREPARING TO TEACH THIS UNIT

Two *Unit Profiles* which follow this section have been prepared to give you an overview of the time, content, instructional strategies, and resources required for delivery of each lesson in this unit. These profiles provide a synopsis which will assist you in gaining a general understanding of the entire unit.

SPECIAL CONSIDERATIONS

Read the total unit and obtain resource materials before beginning each lesson. Read each strategy in Appendix A. The bulletin board "What About Work" will be used throughout the unit. Therefore, retain it for the duration of the lessons.

The assessment item for Lesson 1 should be retrieved from the learners and corrected before Lesson 2. The instructor should correct any errors made or complete any sections left blank by the learners. After Lesson 2, redistribute the assessment item begun in Lesson 1, and have the learners complete it.

For the simulation exercise in Lesson 2, the instructor should collect twelve empty half-gallon cartons. These should be filled with sand or water before the class begins.

In this lesson the "Work Survival Training Session" should be set up before the class begins.

For Lesson 2 there is a Survey of American Folksongs and Folktales used as a supplementary activity. *Songs and Tales* found in Appendix B, will aid the instructor in presenting the physical demands of occupations in our nation's past.

There will be a class simulation of working conditions in Lesson 3. The room order should be set up before class begins (suggestions for this are found in Lesson 3) or a 15 minute recess midway through the lesson may be arranged in order to set things up for the environmental working conditions experiment.

The assessment item for Lesson 3 should be collected from the learners and corrected before Lesson 4. The instructor should correct any errors made or complete any sections left blank by the learners. After Lesson 4 redistribute the assessment item begun in Lesson 3 ahd have the learners complete it.

There will be a classroom mass production simulation experience in Lesson 4. The instructor should have all the materials ready before class for the assembly line activity. (These materials are identified in Lesson 4.)

In Lesson 5 the class will simulate hazardous working conditions. The instructor should have the room arranged before class. The activity requires a balance beam such as those used in kindergarten rooms. If that is not available, a ten-foot length or garden hose may be substituted. Also needed are exercise mats or some form of padding for the floor, and the game "Jackstraws." If these are unavailable, small sticks of wood or pencils may be used as a substitute.

UNIT CONTENT/STRATEGY PROFILE

Lesson	Time	Content	Instructional Strategies
1	40 min.	Learners will list physical demands imposed by various occupations and work tasks.	Discussion Bulletin board display Questioning
2	70 min.	Learners will give an example of an occupation in which a specific physical demand would occur and describe the tasks of the occupation which create the demand. A list of physical demands is provided in the lesson.	Discussion Simulation Questioning
3	45 min.	Learners will list working conditions associated with various occupations and work tasks.	Discussion Questionnaire Simulation Questioning
4	65 min.	Learners will give an example of an occupation in which a specific working condition would occur and describe the tasks of that occupation which make that working condition necessary. A list of working conditions is provided in the lesson.	Discussion Simulation Questioning

UNIT CONTENT/STRATEGY PROFILE

Lesson	Time	Content	Instructional Strategies
5	90 min.	Learners will name those working conditions which may be physically hazardous. For each physically hazardous working condition, the learners will give an example of an occupation in which it would occur. The learners will then describe the tasks of that occupation which make the working condition necessary.	Discussion Simulation Questioning
6	80 min.	Learners will name various working conditions and physical demands for a specific occupation. A list of occupations is provided from previous lessons.	Discussion Comic strips Questioning

UNIT RESOURCE PROFILE

Lesson	Within Unit	To Be Acquired By Instructor
1	Assessment item	Bulletin board space Bulletin board captions 20 slips of 2" x 8" colored construction paper Thumbtacks or pins Broad-tip felt pen
2	Information Sheet: 1. *Work-Survival Training Sheet* 2. *Floor Plan of Work-Survival Training Session* *Demonstration Strategy* (Appendix A)	Assessment item from Lesson 1 Assessment item key from Lesson 1 Bulletin board space Approximately 100 thumbtacks or pins 12 empty half-gallon milk cartons filled with sand or water 25 sheets of newspaper Clock with second hand Container for thumbtacks or pins Five pieces of 5" x 12" construction paper Broad-tip felt pen Twenty-five 2" x 8" strips of construction paper Yarn
3	Worksheet: 1. *Math Problem Set I* 2. *Math Problem Set II* Worksheet Key: 1. *Math Problem Key Set I* 2. *Math Problem Key Set II*	Twenty-five 2" x 8" strips of construction paper Broad-tip felt pen Thumbtacks or pins Record player or tape recorder Comic books, puzzles, or games (optional)

UNIT RESOURCE PROFILE

Lesson	Within Unit	To Be Acquired By Instructor
3 (Cont'd)	Information Sheet: *Room Plan* Assessment item Assessment item key	
4		Thirty 2" x 8" multi-colored construction paper strips Broad-tip felt pen 8" x 11" art paper Assessment item from Lesson 3 Assessment item key from Lesson 3 Additional bulletin board space Four pairs of scissors Two rulers Four pencils Two yellow crayons Two orange crayons Two red crayons Two purple crayons Two black crayons Two unbent paper clips Thumbtacks or pins One large skein of yarn
5	Information Sheet: *Hazards* Assessment item Assessment item key	Twenty-five 2" x 8" construction paper strips Broad-tip felt pen Large open area Balance beam or approximately ten feet or garden hose Books Gym mat or four 12" x 12" cushions

UNIT RESOURCE PROFILE

Lesson	Within Unit	To Be Acquired By Instructor
5 (Cont'd)		Five sets of pick-up sticks and/or jackstraws Large skein of yarn (bright color) Large work table
6	Assessment item Assessment item key	12" x 18" art paper Thumbtacks or pins Bulletin board space (optional) Crayons or colored pencils

INSTRUCTIONAL SEQUENCE

PHYSICAL DEMANDS

Lesson One

Concept

The learner will be able to list physical demands.

Performance Objective

The learner will list physical demands imposed by various work tasks.

Lesson Time

40 minutes

New Vocabulary

Physical demands - activities and skills the body will be called upon to perform

Working conditions - elements of the world around the worker and in which the task is being performed

Manual dexterity - accurate movements using the muscles in the hand

RESOURCES REQUIRED

FOUND WITHIN LESSON	ACQUIRED BY INSTRUCTOR
Assessment item	Bulletin board space
	Bulletin board captions
	20 slips of 2" x 8" colored construction paper
	Thumbtacks or pins
	Broad-tip felt pen

INSTRUCTOR PREPARATION TASKS

Prepare a bulletin board as illustrated in lesson, leaving the bottom half of the board vacant for Lesson 3.

Prepare 20 slips of 2" x 8" colored construction paper.

Acquire thumbtacks or pins and a broad-tip felt pen.

Duplicate a copy of the assessment item for each learner.

INSTRUCTIONAL PROCEDURES

INTRODUCTION

In order to furnish the class with an overview of these lessons, explain to the class that they will be examining the different aspects of a task. Ask if any of the learners had ever agreed to mow a lawn for a friend without finding out the details.

Desired response:

Yes. The lawn was almost an acre, and I had to use a hand mower. My legs were so sore.

Point out to the class that even in the familiar task of mowing a lawn, the learner had thought about and mentioned the two major areas of a job--the physical demand or what work the tasks require, and the working condition or where the task will take place. Ask the learners what the working conditions of the lawn mowing example are.

Desired responses:

1. *Outside*
2. *In the sun*
3. *In the heat of the day*

Explain to the class that they will discuss the "wheres" of a job, as well as experience a few of them.

Then ask the learners what work mowing the lawn required. In other words, what was the physical demand.

Desired response: Much walking

Relate to the class that physical demands will also be discussed and experienced. This will provide each learner with a little background for choosing an occupation.

Continue by explaining that people spend most of their lives working. As long as the learners will spend so much time at work, it is important that they are able to pick an occupation that is suitable for each learner. That may mean working out of doors, being very active, or working someplace that is quiet. Explain that each learner knows how he feels when a task is hard, tiring, too heavy, and so on. These are some of the physical demands the learners may face in future occupations.

Point out to the class that to examine an occupation thoroughly they might start with the physical demands. Encourage the learners to relate these physical demands to the various tasks found in an occupation. Point out that the learners should relate the physical demands to themselves as well.

TASKS

To begin with, explain to the learners the definitions of the following words: *physical demands* are activities and skills the body will be called upon to perform. This may include some form of manual labor.

Working conditions are those elements of the world around the worker and in which the task is being performed.

Manual dexterity refers to accurate movements using the muscles in the hand.

Ask the learners if they have any outside interests.

Possible responses:

1. *Rock collecting*
2. *Stamp collecting*
3. *Reading*
4. *Swimming*
5. *Horseback riding*
6. *Knitting*
7. *Playing the violin*
8. *Fishing*
9. *Painting*

Point out the great variety in the individual interests of the class. Ask why each learner chose his own hobby.

Possible responses:

1. *My big brother fishes.*
2. *My mother taught me.*
3. *My uncle gave me his stamp collecting equipment.*
4. *My whole family is musical.*

The family is usually the place where an interest begins. However, interests may come from other sources. These interests may be directed either to a hobby or an occupation. Ask if relatives or all the adults in most families have the same occupation.

Desired response: No

Even though a family may be large, most family members have different jobs. At some time something else must have interested them, assuming they are interested in their various jobs.

Now, remind the learners of the definition of physical demand. Ask a learner whose hobby is a sport what the physical demands of that sport might be. (Example: swimming.)

Possible responses:

1. *Constant movement of arms and legs*
2. *Ability to synchronize breathing with arm and leg movement*
3. *Ability to relax in the water*

Continue by asking the learners if they were given the task of knitting, what would some of the physical demands be.

Possible response:

Moving fingers quickly while working with small objects

Point out to the learners that physical demands include restraining the body from doing something that would undo the work task. In knitting, for example, not only is operating the knitting needles a physical demand, but sitting quietly so that none of the stitches are dropped is also a physical demand.

Now the learners should have the idea of what physical demands are. Ask the class to think of some of the physical demands they might find, not only in hobbies, but also in work tasks; things the learners might be asked to do that ask the body to use energy to do something or not to do something.

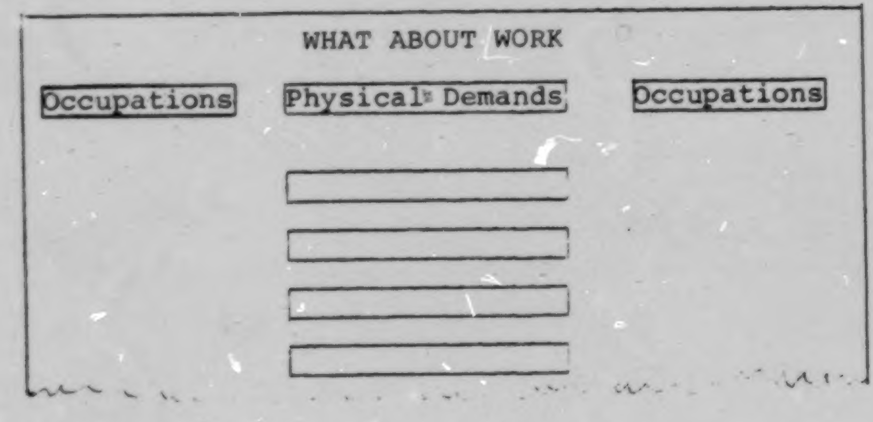
Desired responses:

1. *Lifting great weights*
2. *Standing for long periods of time*
3. *Carrying many things great distances*

Ask the learners to name as many physical demands as they can think of. Write each on a piece of 2" x 8" construction paper, varying the colors. Use a broad black felt tip pen. Pin these on the bulletin board under the heading "Physical Demands" in the center of the upper half of the board. The bottom half should remain vacant as it will be used in Lesson 3. The list should include:

1. Lifting
2. Carrying
3. Pushing/pulling
4. Climbing/balancing
5. Reaching/stretching
6. Eye strain
7. Running/jumping

The bulletin board will appear as follows:



As each physical demand is named and written down, discuss it with the class, asking such questions as: *How is ________ physically demanding?* Direct the learners' responses to the identification of the body parts and muscles used.

Desired responses:

1. *Lifting requires strength in the back and arms.*
2. *Carrying requires strength in the arms, shoulders, and thighs.*
3. *Pushing and pulling require strength in the previously mentioned muscles.*
4. *Climbing requires balance, as well as coordination of the arms and legs.*
5. *Reaching and stretching require strength in the arms, neck, and upper body muscles.*
6. *Eye strain (or pain) occurs during situations in which the eyes must maintain focus on small, moveable objects or attend to the same type of materials for extended periods of time; lighting and other conditions may effect eye strain.*
7. *Running and jumping require balance, strength in the leg muscles, and endurance (stamina).*

Explain to the learners that this list is not complete, but it does give a good idea of the various types of demands placed on the body.

SUMMARY

Explain to the learners that now they have one way of looking at occupations. An occupation can be selected by thinking of its physical demands and whether, as a worker, those requirements are attainable. Ask the learners to try to relate these physical demands to occupations before the next lesson. Suggest they talk to workers they know (family, friends, school personnel) and find out what physical demands their occupation imposes. Explain to the learners that in the next lesson they will experience some of these demands and then relate them to occupations.

Before concluding, ask the learners to identify other physical demands they may encounter in school.

Possible responses:

1. *Eye strain*
2. *Prolonged sitting*
3. *Writer's cramp*

Accept their responses as physical demands if they relate to tasks required or effects to the body of tasks performed. Inform the learners that all occupations require certain physical things of the worker, and in the next lesson they will be experiencing some physical demands and relating them to occupations.

SUPPLEMENTAL ACTIVITY

Direct the attention of the learners to the sheets of paper on their desks while passing out pipe cleaners and glue. The object of this project is to create either a pipe cleaner picture (by pasting the pipe cleaners directly to the paper) or a pipe cleaner sculpture (using the art paper as a base to which the sculpture may be glued) of a body performing a physically demanding work task. Emphasis should be placed on realism in the work, as well as creativity, trying to expand the list on the bulletin board. Direct the learners to label the physical demand demonstrated in their various works.

When the learners have finished, ask each to come forward and relate to the class the physical demand being exhibited. Be sure to differentiate between the physical demand and its result. For example, a figure kissing his feet is not showing the physical demand of "prolonged standing." That figure is showing the physical demand of "bending the back and leg." After the learner has shared his creation with the class, he may place it on the bulletin board or display table set aside for that purpose.

ASSESSMENT PROCEDURES

DESCRIPTION

A completion item is used to assess achievement of the objective. The learner will list four types of physical demands imposed by various occupations and work tasks in Part I of the assessment item (see special considerations).

DIRECTIONS

The learner will read the item and list four types of physical demands.

KEY

Instructor's satisfaction (see assessment item key).

ASSESSMENT ITEM

Name_______________

Date_______________
Lessons 1 and 2

Lesson 1 - List four physical demands.
(Part I will be answered after Lesson 1)
Lesson 2 - List an occupation and describe the tasks which create the physical demands of that occupation. (Parts I and II will be answered after Lesson 2)

	PART I	PART II	PART III
	Physical Demands	Occupations	Describe Task(s) Which Create the Physical Demand
1.			
2.			
3.			
4.			

ASSESSMENT ITEM KEY

Lesson 1 - List four physical demands.
(Part I will be answered after Lesson 1)
Lesson 2 - List an occupation and describe the tasks which create the physical demands of that occupation. (Parts I and II will be answered after Lesson 2)

	PART I	PART II	PART III
	Physical Demands	Occupations	Describe Task(s) Which Create the Physical Demand
1.	Constant use of arm muscles	Professional boxer	Delivering the upper cut
2.	Constant bending and stretching	Boxboy	Filling shelves, marking prices, etc.
3.	Bending, lifting, or carrying weight	Longshoremen	Loading and unloading cargo from ships
4.	Prolonged looking up or down	Seamstress	Fashioning and sewing a dress, sewing up the hem, etc.

Note: Accept any other reasonable response

PHYSICAL DEMANDS AND THE WORLD OF WORK

LESSON TWO

CONCEPT

For each physical demand discussed, the learner will give an example of an occupation in which it occurs and give a description of its tasks.

PERFORMANCE OBJECTIVE

Given his list of physical demands, the learner will, for each demand, give an example of an occupation in which it would occur and describe the tasks of that occupation which creates the demand.

LESSON TIME

45 minutes

RESOURCES REQUIRED

FOUND WITHIN LESSON	ACQUIRED BY INSTRUCTOR
Information Sheet: 1. *Work-Survival Training Sheet* 2. *Floor Plan of Work-Survival Training Session*	Assessment item from Lesson 1 ____________
	Assessment item key from Lesson 1
Demonstration Strategy (Appendix A)	Bulletin board space
	Approximately 100 thumbtacks or pins
	12 empty half-gallon milk cartons filled with sand or water
	25 sheets of newspaper
	Clock with second hand
	Container for thumbtacks or pins
	Five pieces of 5" x 12" construction paper
	Broad-tip felt pen
	25 2" x 8" strips of construction paper
	Yarn

INSTRUCTOR PREPARATION TASKS

Review the following infromation sheets:
1. *Work-Survival Training Sheets.*
2. *Floor Plan of Work-Survival Training Session.*

Secure one blank bulletin board. Divide it into two or three equal parts or cover an existing board with butcher paper. This bulletin board can be removed after this lesson.

Divide the thumbtacks or pins into equal amounts in containers in front of each portion of the bulletin board.

Cut the newspaper pages into fourths and stack in equal amounts in front of each portion of the bulletin board.

Fill 12 half-gallon milk cartons with sand or water, and seal them so the contents will not leak out.

Cut five 5" x 12" pieces of construction paper for signs. Write the station number and title on each.

Cut construction paper into 2" x 8" strips. These will be used for naming occupations on the "What About Work" bulletin board.

Read the *Demonstration Strategy.*

Evaluate the assessment item from Lesson 1 and have them ready to redistribute in this lesson.

Acquire the following items:

1. Clock with second hand
2. Broad-tip felt pen
3. Yarn (bright color) to connect the occupations and physical demands listed on the "What About Work" bulletin board

INSTRUCTIONAL PROCEDURES

INTRODUCTION

Explain to the class that they have begun to discover the world of work. In the last lesson the learners discussed what physical demands are. In this lesson the learners will be supplying examples of occupations for each physical demand discussed in the previous lesson. Point out that knowing of the existence of physical demands is useful only when the learners also know in which types of jobs to find these demands. Explain to the learners that if they have an accurate idea of the physical demands of an occupation, they may be better prepared to meet these demands. This makes it easier to perform the work tasks. By knowing what tasks the job includes, the worker will be able to finish the task more quickly and with higher quality.

TASKS

Direct the learners' attention to the bulletin board. Ask the learners to explain what physical demands are.

Possible response:

Activities and skills the body will be called upon to perform. This may include some form of manual labor.

Ask if all the activities listed on the bulletin board fulfill the definition.

Desired response: Yes

Before discussing the physical demands further, direct the learners to divide into five groups, explaining that the class will now participate in a work-survival training session. Organize the learners into separate work stations. Each station should be numbered and titled, such as Station 4, "Carton Carry." Assign a number and title to each station. Read the resource sheet that pertains to each station, and explain the activities of each station with the class by having learners at that station demonstrate the various physical demands.

Explain to the class that they will be performing five different activities. At Station 1 the class will do running and jumping; Station 2 - arm circles; Station 3 - deep knee bends and toe touches; Station 4 - carton carry; Station 5 - paper put-up.

The *Work-Survival Training Sheet* describes each station in detail.

Direct each group to take turns demonstrating their station to the whole class. After the demonstration, they will do the following:

1. For five minutes each group will perform the activity of its station.
2. The groups then do the activity of the next station, with group five going to station 1 to do that activity.
3. For five minutes each group will again perform the new activity.
4. Continue until all groups have performed the activities of all five stations.

5. Then direct the learners to return to their seats.

Now that the learners have experienced a few physical demands, direct them to consider the demand of each station in the obstacle course and begin a discussion. Ask what the physical demand of Station 1 was.

Desired responses:

1. *We used our leg muscles in running and jumping.*
2. *We stretched our arm and shoulder muscles.*

Then ask the learners if they know of any job in which these physical demands occur. As each learner answers, have him describe how the job he has listed requires this physical demand.

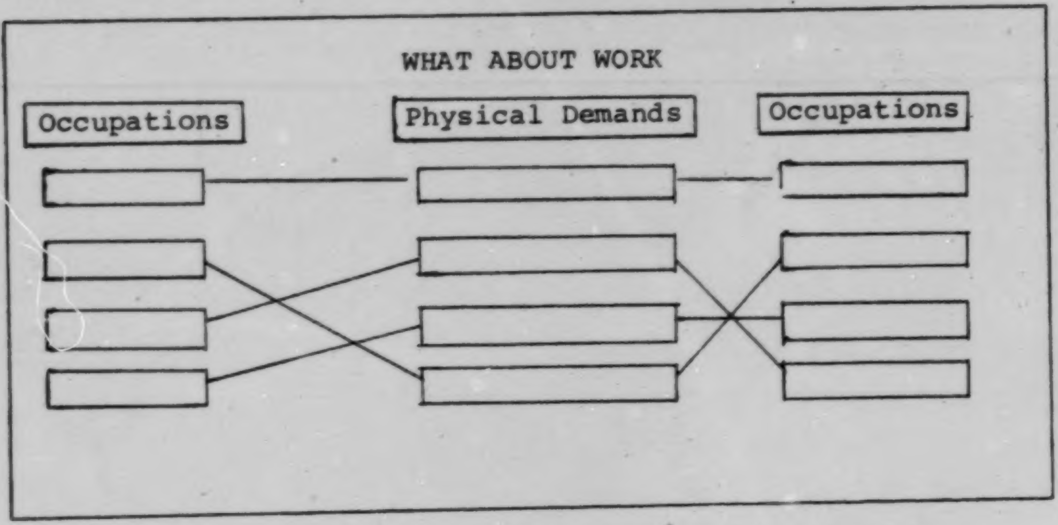
Write each occupation named on a 2" x 8" paper strip and pin this strip on "What About Work" bulletin board under the heading "Occupations."

Possible response:

Occupation	*How the Occupation Requires the Physical Demand*
1. *Professional football*	*Running to tackle players, blocking for ball carrier, jumping to hurdle piles of men, catching a pass.*
2. *Professional basketball*	*Taking the ball down court and making a jump shot for the basket.*
3. *Policeman*	*Running to catch lawbreakers, jumping fences, etc.*
4. *Fireman*	*Running to save a person in a burning house, jumping from the second floor into the net, etc.*
5. *Army*	*Running between foxholes, running to get to the plane; jumping across barriers.*

As each station is considered, the learners should discuss the physical demand, the occupations which have that physical demand, and how or where to find that physical demand in the occupation the learner mentioned. Be sure to list the occupations the learners mention on 2" x 8" construction paper strips. Mount the strips on the "What About Work" bulletin board, on the "Occupation" section of the bulletin board.

The bulletin board will appear as follows:



Now, ask what the physical demands of Station 2 were.

Desired responses:

1. *Use of arm muscles*
2. *Use of back muscles*

Ask the learners if they know of any job in which this physical demand occurs. As each learner answers, have him describe how the job he has listed requires this physical demand.

Possible responses:

Occupation	*How the Occupation Requires the Physical Demand*
1. *Boxer*	*Delivering an upper cut*
2. *Bowler*	*Releasing the ball*
3. *Painter*	*Painting a wall*
4. *Carpenter*	*Hammering nails in walls*

Ask what the physical demands of Station 3 were.

Desired responses:

1. *Leg flexibility*
2. *Bending*
3. *Stretching*

Ask the learners if they know of any job in which this physical demand occurs. As each learner answers, have him describe how the job he has listed requires this physical demand.

Possible responses:

Occupation	*How the Occupation Requires the Physical Demand*
1. Box boy	*Filling shelves, marking prices, etc.*
2. Kindergarten and nursery teachers	*Picking up toys, playing with children, and their general care*
3. Ambulance attendant	*Putting patient on stretcher and then into ambulance*

Ask what the physical demands of Station 4 were.

Desired response:

1. *Bending*
2. *Lifting*
3. *Carrying*

Ask the learners if they know of any job in which this physical demand occurs. As each learner answers, have him describe how the job he has listed requires this physical demand.

Possible responses:

Occupation	*How the Occupation Requires the Physical Demand*
1. Longshoreman	*Loading and unloading ships*
2. Moving men	*Loading and moving furniture*
3. Carpenters and masons	*Moving building materials*

Ask what the physical demands of Station 5 were.

Desired response:

1. *Much looking up*
2. *Use of arm muscles*

Ask the learners if they know of any job in which this physical demand occurs. As each learner answers, have him describe how the job he has listed requires this physical demand.

Possible responses:

Occupation	*How the Occupation Requires the Physical Demand*
1. Interior decorator	*Choosing and hanging drapes or curtains, supervising wall papering, choosing light fixtures*
2. Painter	*Painting ceilings*
3. Seamstress	*Fashioning a dress, pinning up a hem*

SUMMARY

After having discussed the stations, direct the learners' attention to the bulletin board. Explain to the learners that as a review, they are to identify the occupations associated with each physical demand. As they do this, the instructor will connect the demand to each occupation it relates to.

Explain to the learners that now they have learned some physical demands and have identified occupations with tasks that require certain body movements. This information will increase their knowledge of occupations.

Ask the learners if they can relate any of their parents' or friends' jobs to the physical demands shown on the bulletin board. Use these examples to explain that all jobs are physically demanding, but some are more demanding than others.

Explain to the learners that in the next lesson they will learn about another factor that is present or identifiable in all jobs. This factor may also effect the body as do the physical demands.

SUPPLEMENTARY ACTIVITIES

Read folk tales or sing songs related to the careers in early America. Ask the learners to identify the physical demands of these occupations.

Appendix B contains copies of the following folksongs and folktales.

1. *John Henry*
2. *Steel Layin' Holler*
3. *Joe Magarac - Man of Steel*
4. *Just A-Lookin' For A Home*
5. *The Railroad Cars Are Coming*
6. *Casey Jones*
7. *Raging Canawl*
8. *Stormalong*
9. *The Shanty-Man's Life*
10. *Paul Bunyon*
11. *The Old Chisolm Trail*

ASSESSMENT PROCEDURES

DESCRIPTION

A completion item is used to assess achievement of the objective. Given the four physical demands of the previous item, the learner will give an example of an occupation in which it would occur and describe the tasks of that occupation which create the demand. Use Parts II and III of the assessment chart from Lesson 1 (see special considerations).

DIRECTIONS

The learner will read the item and give an example of an occupation in which the physical demand of the previous item would occur and describe the tasks of the occupation which create the demand.

KEY

Instructor's satisfaction that the occupation listed is related to the physical demand identified in Part I and the tasks described in fact do relate to the physical demand and are tasks of the occupation listed (see the assessment item key - Lesson 1.)

WORK-SURVIVAL TRAINING SHEET

Lesson 2

STATION 1 - RUNNING AND JUMPING

PHYSICAL DEMAND: Use of leg muscles, stretching of arm and shoulder muscles

DIRECTIONS: Choose one learner to be in charge of timing. The timer will call out each minute for a five-minute period.

1. Running in place - one minute
2. Juming jacks - ten per ten seconds for a period of one minute

   Step 1 - Feet together

   Step 2 - With a jump, put feet apart - about one foot
   Hands clap above head

   Step 3 - Same as Step 1
   Continue Steps 1 and 2
   (1 jumping jack)

3. Running in place - one minute
4. Jumping jacks - one minute
5. Running in place - one minute

STATION 2 - ARM CIRCLES

PHYSICAL DEMAND: Use of arm and back muscles

DIRECTIONS: One learner should be in charge of timing calling out six 45-second intervals and ending with one 30 second interval.

1. Extend arms full-length to the side, parallel to the floor. Move arms forward making large circles - 45 seconds.
2. Move arms in large backward circles - 45 seconds. Extend arms in front, full-length, parallel to the floor.
3. Make circles as amall as possible, moving hands toward each other - 45 seconds.
4. Reverse direction - 45 seconds. Extend arms full-length to the side, parallel to the floor. Start moving arms in large forward circles, slowly decreasing to very small.
5. Slowly increase size of circles again - 45 seconds.
6. Reverse direction using same procedure - 45 seconds. Extend arms full length above head.
7. Make large forward circles - 30 seconds.

4

STATION 3 - DEEP KNEE BENDS AND TOE TOUCHES

PHYSICAL DEMAND: Leg flexibility, bending, stretching

DIRECTIONS: Choose one learner to be in charge of timing who will call out the end of the five-minute period.

1. Keep back straight.
2. Bend at the knees until body is almost resting on heels.
3. Return to full-standing position.
4. Keeping legs straight bend at the waist until touching toes.
5. Alternate deep knee bends and toe-touches
6. Do two of the exercises every five seconds for a five minute period.

STATION 4 - CARTON CARRY

PHYSICAL DEMAND: Bending, lifting, and carrying

DIRECTIONS: Choose one learner to be in charge of timing who will call out the end of the five-minute period.

Arrange the milk cartons into pairs about ten feet apart.

1. Each learner should stand behind a pair of milk cartons.
2. Those learners "left over" will be second in line.
3. Each learner who is first in line should carry his cartons to the next position and set them down. (These positions may be in a circle, square, or any pattern. Refer to floor plan.)
4. If there are no "left-over" learners, the learner should then pick up the cartons at this position and carry them to the next position.
5. Continue around all the positions - five minutes. (If there are two or more people at each station, the carrier will go to the end of the line and wait his turn.)

STATION 5 - PAPER PUT-UP

PHYSICAL DEMAND: Much looking up, use of arm muscles

DIRECTIONS: Choose one learner to be in charge of the timing who will call out the end of the five-minute period.

1. Divide the group into teams of three.

2. Each team should have a supply of newspaper that has been cut into one-fourth sheets, and thumbtacks.

3. The first person of the team will put up as many quarter sheets as his team's portion of the bulletin board allows. (There will probably be two teams, leaving each team half the bulletin board. Should there be three teams, the bulletin board would be divided into thirds.)

4. As soon as the first team member has papered his/her half portion of the bulletin board, the second person should begin taking them down.

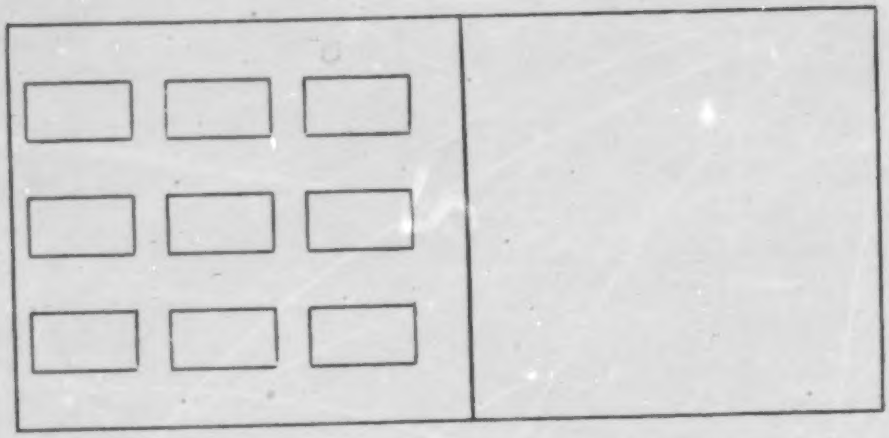
5. As soon as the team member has finished papering the bulletin board, he/she should go to the end of the line.

6. When the second learner has reached the half-way point, the third learner will begin putting up the quarter sheets again. (Newspapers should be picked up from the stack on the floor and returned to the stack on the floor. Pins or thumbtacks should be kept in a container on the floor.)

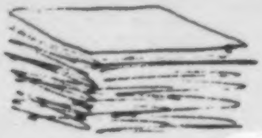
7. Team members should rotate in this manner, performing at a moderate speed - five minutes.

STATION 5

Sample Bulletin Board:

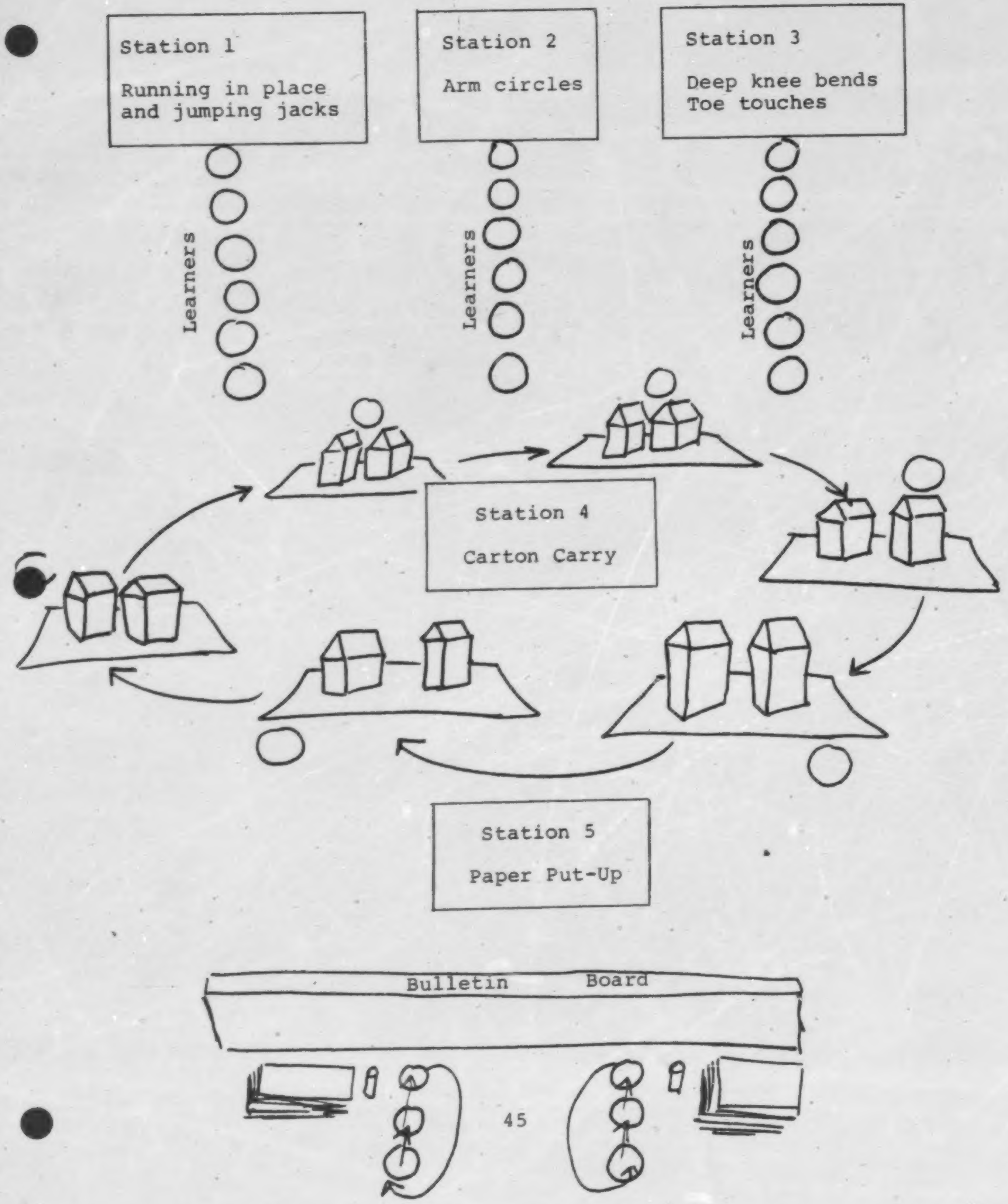


Cut Newspaper Stack



Thumbtack Container

FLOOR PLAN OF WORK-SURVIVAL TRAINING SESSION


Station 1
Running in place and jumping jacks
Station 2
Arm circles
Station 3
Deep knee bends
Toe touches
Learners
Learners
Learners
Station 4
Carton Carry
Station 5
Paper Put-Up
Bulletin Board

ENVIRONMENTAL
WORKING CONDITIONS
LESSON THREE

CONCEPT

Environmental working conditions may affect the ability to work.

PERFORMANCE OBJECTIVE

The learners will list environmental working conditions.

LESSON TIME

45 minutes

NEW VOCABULARY

Environmental working conditions - those elements of the world around the worker in which tasks are being performed

RESOURCES REQUIRED

FOUND WITHIN LESSON	ACQUIRED BY INSTRUCTOR
Worksheet: 1. *Math Problem Set I* 2. *Math Problem Set II*	25 2" x 8" strips of construction paper Broad-tip felt pen
Worksheet Key: 1. *Math Problem Key Set I* 2. *Math Problem Key Set II*	Thumbtacks or pins Record player or tape recorder
Information Sheet: *Room Plan*	Comic books, puzzles, or games (optional)
Assessment item	
Assessment item key	

INSTRUCTOR PREPARATION TASKS

Place the caption"Working Conditions" on the "What About Work" bulletin board. Place below the caption the following words leaving room for the learners to add their ideas.
1. Hot
2. Cold
3. Dark
4. Damp
5. Noisy

Rearrange the room furniture as suggested on the information sheet *Room Plan*.

Duplicate a copy of the following items for each learner:
1. *Math Problems Set I*
2. *Math Problems Set II*
3. Assessment item

Prepare 25 2" x 8" strips of construction paper to be used in adding to the bulletin board "Working Conditions" during the lesson.

Acquire the following items:
1. Broad-tip felt pen
2. Thumbtacks or pins
3. Record player or tape recorder
4. Comic books, puzzles, or games (optional)

INSTRUCTIONAL PROCEDURES

INTRODUCTION

If the learners ask questions about the rearrangement of the room, tell them you will explain it after this lesson. Instruct them to sit at their own desk even though it may be in a different place than usual.

Explain to the learners that in the last lesson they were able to experience physical demands by performing several tasks. They also saw how Americans of the past experienced physical demands in the occupations which are now famous in legend and song. The yarn used on the bulletin board helped to show how the occupations and the physical demands were related. Explain to the learners that one physical demand could describe many occupations, and that one occupation could have many physical demands.

Point out that knowing this will help them see that there are many physical demands to take into consideration when choosing a job which will help them select an occupation that will please them.

Continue that in this lesson a new factor will be introduced. This new factor relates to the environment of the work setting. Explain to the learners that the term *environmental working conditions* means those elements of the environment that surround the worker while performing his/her tasks. The last two lessons focused on how the tasks were performed; this lesson will focus on where the tasks are performed. Knowing this will help them choose an occupation that relates to what they want to do and where they want to do it.

The class will participate, unknowingly at first, in an experiment about their classroom and how it affects the work of the learners. To begin ask the learners if they would like to follow their interests as described below:

1. In 120 degree whether
2. In a thunderstorm
3. In a subzero blizzard
4. In a crowded building
5. In a empty building
6. In great noise
7. In absolute silence

Possible response: No, it would be too uncomfortable.

Point out to the learners that no matter how much they love their interests or their jobs, where they do them, under what environmental working conditions, makes a big difference. It may even cause them to choose another different interest or a new job.

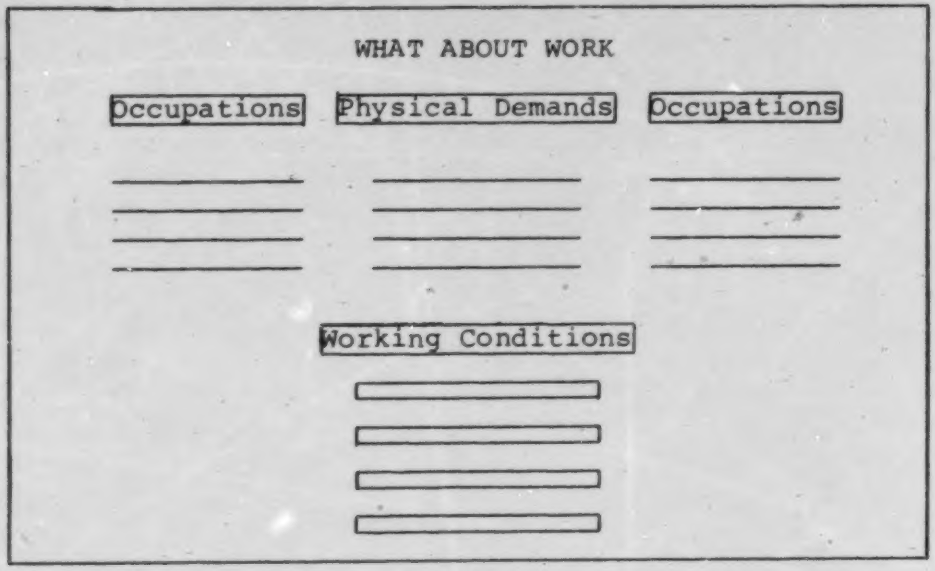
TASKS

At this time, explain again the definition of environmental working conditions as those elements of the world around the worker and in which the task is being performed. Direct the attention of the learners to the list of working conditions on the bulletin board under the heading "Working Conditions." Ask the learners to add to this list.

Possible responses:

1. *Drafty*
2. *Isolated*
3. *Quiet*
4. *Light*
5. *Weather*
6. *Hours*
7. *Wet*
8. *Lonely*

Record these and any other environmental working conditions on 2" x 8" strips of construction paper, and mount them on the bulletin board. The bulletin board should appear as follows:



Tell the learners they are going to participate in an experiment, and that it will be explained later. Ask half the class to take their pencils and sit on the floor. This area has been arranged according to the *Room Plan* information sheet. Half the class will remain at their seats.

Distribute a copy of *Math Problems Set 1* to each learner.

Instruct the learners to work these problems. The instructor may relate to the learners that this activity is not for a recorded grade but it is important to the lesson so they should try their best.

After the learners have finished, correct the worksheet, as a group, using the *Math Problems Set I Key* provided in the lesson. Direct the learners to write the number correct at the top of the worksheet. Do not answer questions pertaining to the experiment.

Direct the class to switch places. Those on the floor will sit at their seats; those at their seats will take their pencils and move to the area on the floor.

Distribute *Math Problems Set II* to each group, and instruct them to complete this set. When they have finished, ask the learners seated on the floor to return to their seats. Correct as a group this set of math exercises, using the *Math Problems Set 2 Key* provided. Direct each learner to put the number correct at the top of the page.

Explain to the learners that they have taken part in an experiment dealing with their working environment. Tally on the board those learners who had a higher score while seated at their desks. Tally the number of learners who had a higher score while seated on the floor.

At this time ask the learners if they can identify the environmental working conditions present during this experiment.

Desired Responses:

1. *Working in seats versus working on the floor*
2. *Working in a quiet area versus working with noise in the background*
3. *Working without distractions versus working with distracting materials*

Explain to the class that the environment in which the work tasks are performed will effect the results of the task. Point out that some learners performed better in a quiet, organized environment, while others performed better in a less structured area.

SUMMARY

Inform the learners that they have now identified several environmental working conditions. Ask a learner to read the list on the bulletin board and identify those that were present in the classroom experiment.

Explain to the learners that all occupations are associated with some kind of working condition. To make a better choice of an occupation, a worker should consider the type of environment in which he will be working. In the next lesson the learners will relate working conditions to specific occupations. Point out to the learners that they will begin to see where they would like to work and under which conditions they are best able to perform.

ASSESSMENT PROCEDURES

DESCRIPTION

A completion item is used to assess achievement of this objective. The learner will list four types of working conditions which may be present in work tasks.

The learners should use Part I of this item for Lesson 3. Part II and Part III will be completed after Lesson 4. Collect and evaluate Part I prior to beginning Lesson 4. (see special considerations).

DIRECTIONS

The learner will read the item and list four types of working conditions.

KEY

Instructor's satisfaction (see assessment item key).

ASSESSMENT ITEM

Name________________

Date________________

Lessons 3 and 4

Directions:

Part I - List four working conditions.
(Part I will be answered after Lesson 3.)
Part II - Write an occupation that each working condition describes.
Part III - Write how the working condition describes the occupation.
(Parts II and III will be answered after Lesson 4.)

	PART I	PART II	PART III
	Working Condition	Occupation	Describe the Task(s) of the Occupation That Makes the Working Condition Necessary.
1.			
2.			
3.			
4.			

ASSESSMENT ITEM KEY

Lessons 3 and 4

Directions:

Part I - List four working conditions.
(Part I will be answered after Lesson 3.)
Part II - Write an occupation that each working condition describes.
Part III - Write how the working condition describes the occupation.
(Parts II and III will be answered after Lesson 4.)

	PART I	PART II	PART III
	Working Condition	Occupation	Describe the Task(s) of the Occupation That Makes the Working Condition Necessary.
1.	Wet, Cold, Noisy	Lifeguard	Works on sunny, cloudy, sometimes rainy and chilly days ready to rescue swimmers
2.	Wet, Cold, Dark	Fisherman	Must be ready to harvest fish in all weather conditions
3.	Noisy	Factory Worker	Works around large machinery making noise
4.	Dark	Photographer	Must develop prints in dark room

Note: Accept any other reasonable response.

MATH PROBLEMS

SET I

Name____________

Date____________
Lesson 3

Number Correct______

78
41
38
92
89
+41

17546
-9879

2758
x29

$36.40
x 271

958
x870

$29\overline{)75,627}$

$9\overline{)49,364}$

283
731
664
339
446
+827

$23,410.13
-9,784.79

126518
487139
+ 81273

MATH PROBLEMS KEY

SET I

Lesson 3

```
  78
  41
  38
  92
  89
 +41
 ---
 379
```

```
 17546
 -9879
 -----
  7667
```

```
  2758
   x29
 -----
 24822
 5516
 -----
 79982
```

```
    $36.40
     x271
    ------
      3640
    25480
    7280
 ---------
 $9,864.40
```

```
    958
   x870
 ------
    000
  6706
 7664
 ------
 833460
```

```
      2 607 r24
 29)75,627
    58
    ---
    176
    174
    ---
      227
      203
      ---
       24
```

```
   5 484 r8
 9)49,364
   45
   --
    43
    36
    --
     76
     72
     --
      44
      36
      --
       8
```

```
  283
  731
  664
  339
  446
  827
 ----
 3290
```

```
  $23,410.13
   -9,784.79
 -----------
  $13,625.31
```

```
  126518
  487139
  +81273
  ------
  694930
```

Name____________

Date____________
Lesson 3

Number Correct______

MATH PROBLEMS

SET II

796
339
814
447
973
851

28657
-10989

3689
x31

$47.51
x 382

1069
x980

30)86,738

9)50,475

$34,521.24
-10,895.89

394
842
775
440
557
+938

237619
598240
+52384

MATH PROBLEMS KEY

SET II Lesson 3

```
 796
 339
 814
 447
 973
+851
4220
```

```
 28657
-10989
 17668
```

```
  3689
   x31
  3689
 11067
114359
```

```
 $47.51
   x382
   9502
  38008
 14253
1814882
```

```
   1069
   x980
  85520
  9621
1047620
```

```
     2 891  R 8
 30)86,738
    60
     267
     240
      273
      270
        38
        30
         8
```

```
   5 608 R 3
 9)50,475
   45
    54
    54
     07
      0
     75
     72
      3
```

```
 394
 842
 775
 440
 557
 938
3946
```

```
 $34,521.24
-10,895.89
 $23,625.35
```

```
 237619
 598240
 +52384
 888243
```

ROOM PLAN

Lesson 3

The object of this lesson is for the learners to experience working in two settings. One is a quiet, organized environment; the other is a noisy and distracting environment.

Arrange the room so that there is place on the floor for half the class. Place a record player or tape recorder nearby and play it loud enough to disturb this group. If the instructor has other distracting materials (comic books, puzzles, games), these should be placed in reach of the group on the floor.

The other group will sit at their desks away form the distracting materials.

Both groups will complete a math worksheet. Then they will exchange positions and complete a second math exercise. Comparisons of their scores under each working environment will be made.

WORKING CONDITIONS AND THE WORLD OF WORK

LESSON FOUR

CONCEPT

One occupation may have many working conditions, and many occupations may have the same working condition.

PERFORMANCE OBJECTIVE

Given a list of working conditions, the learner will (for each working condition) give an example of an occupation in which it would occur and describe the tasks of that occupation which make the working condition present.

LESSON TIME

50 minutes

RESOURCES REQUIRED

FOUND WITHIN LESSON	ACQUIRED BY INSTRUCTOR
	Thirty 2" x 8" multicolored construction paper strips
	Broad-tip felt pen
	8" x 11" art paper
	Assessment item from Lesson 3
	Assessment item key from Lesson 3

RESOURCES REQUIRED (Continued)

FOUND WITHIN LESSON	ACQUIRED BY INSTRUCTOR
	Additional bulletin board space
	Four pairs of scissors
	Two rulers
	Four pencils
	Two yellow crayons
	Two orange crayons
	Two red crayons
	Two purple crayons
	Two black crayons
	Two unbent paper clips
	Thumbtacks or pins
	One large skein of yarn

INSTRUCTOR PREPARATION TASKS

Write the names of the following occupations on 2" x 8" strips and add to the bulletin board under the "Occupations" caption:

1. Lifeguard
2. Fisherman
3. Factory worker
4. Photographer
5. Forest ranger

Prepare additional 2" x 8" strips upon which to write occupations named by learners.

Secure the assessment item for each learner from Lesson 3. This should have been scored prior to beginning Lesson 4.

Acquire the following items:

1. Broad-tip felt pen
2. 8" x 11" art paper (one for every four learners)
3. Four pairs of scissors
4. Two rulers
5. Four pencils
6. Two yellow crayons
7. Two orange crayons
8. Two red crayons
9. Two purple crayons
10. Two black crayons
11. Two unbent paper clips
12. Thumbtacks or pins (two for each picture)
13. One large skein of yarn (bright color)
14. Additional bulletin board space to hang pictures

INSTRUCTIONAL PROCEDURES

INTRODUCTION

Review with the class that in the last lesson they discovered how important it is for the prospective employee to take into account the working conditions that may be present.

Ask the class what the experiment of the previous lesson showed the learners.

> *Desired response:*
>
> *Some people work better in quiet, organized areas, while others work better in less structured areas.*

Point out that each learner learned something about how he/she feels when working in these two situations.

Ask the learners if the working conditions they experienced in class would have an effect on them.

> *Possible response: Yes*

Explain to the learners that in today's lesson they are going to name occupations and identify the working conditions present in that occupation.

TASKS

Ask the learners to look at the lists of occupations on the bulletin board. Point out that several occupations have been added to the list as follows:

1. Lifeguard
2. Salesman
3. Fisherman
4. Mechanic
5. Farmer

Using these and the previously posted occupations, identify the environmental working conditions present in each occupation. Ask the learners to name the working condition, then the occupation and the tasks performed in the occupation that are associated with the working condition. Using yarn, connect the occupation to its related physical demand.

Possible responses:

	Working Conditions	*Occupation*	*Tasks Associated with Working Condition*
1.	*Wet Cold Noisy*	*Lifeguard*	*Works on sunny, cloudy, sometimes rainy and chilly days ready to rescue swimmers*
2.	*Wet Cold Dark*	*Fisherman*	*Must be ready to harvest fish in all weather conditions*
3.	*Noisy*	*Factory Worker*	*Works around large machinery making noise*
4.	*Dark*	*Photographer*	*Must develop prints in dark room*
5.	*Lonely Quiet*	*Forest Ranger*	*Stays in tower watching for fires*

Explain to the learners that they will participate in a make-believe assembly line. Explain that there are many things made one piece at a time. These things are made by assembly line workers, each person adding his part until the product is complete. Ask the learners if they can think of any such product made by mass production.

Possible responses:

1. *Automobiles*
2. *Radios*

Ask the learners what working conditions might be present.

Desired responses:

1. *Crowded area*
2. *Noise*

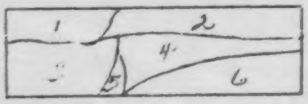
Explain that the assembly line is a fairly common occurrence in American industry. The American people depend on mass production. Since this is how so many things are made, it is very possible that someone in the class may have such an occupation sometime in his life. Mass production is a process where one person does only one part of the entire job of manufacturing, for example, making a television set, a telephone, or a car.

The class will now have a chance to try out an assembly line situation. Have the learners keep in mind that they should be able to list some working conditions of an assembly line worker after this activity. Inform the class that this will be an assembly line art project. Line the desks up in two rows facing each other to make movement of the step-to-step project easier. Divide the class so that about the same number of learners are at each step. If the class is small, some steps may be combined.

Each learner will have only one job.

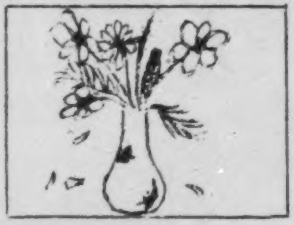
The following example is set up for a sample class of 28 members.

Step 1 - Two learners will cut the 8" x 11" paper into 4" x 5 1/2" pieces.
Step 2 - Two learners will cut 4" x 5 1/2" paper into 2" x 2 3/4" pieces.
Step 3 - Two learners will draw and number a set design such as:



Step 4 - Two learners will color (with crayon) area one yellow.
Step 5 - Two learners will color area two blue.
Step 6 - Two learners will color area three green.

Step 7 - Two learners will color area four orange.
Step 8 - Two learners will color area five red.
Step 9 - Two learners will color area six purple.
Step 10 - Two learners will color over the entire sheet with black.
Step 11 - Two learners will scratch a set design with an unfolded paper clip (or any sharp implement)



Step 12 - Two learners will collect the art project and deliver it to the mounters.
Step 13 - Two learners will hand up thumb tacks or pins to the mounters.
Step 14 - Two learners will mount the pictures on the bulletin board.

After the pictures are mounted and the learners are back in their regular positions, ask what some of the working conditions of the assembly line were.

Possible responses:

1. *Repetitious*
2. *Fast*
3. *Noisy*

Add these responses to the bulletin board if they are not already present.

Ask if any of the other occupations on the bulletin board would have these working conditions.

Possible responses:

1. *A farmer has to plow row after row so his job is repetitious.*
2. *A cowboy's job requires speed when he has to chase or brand a steer.*

The same working conditions exist in many occupations. Ask the learners to look at the other occupations and see if any have the same working conditions.

Possible responses:

1. *Fishermen, cowboys, and lifeguards all have to endure all kinds of weather.*
2. *Lifeguards and fishermen get wet.*
3. *Farmers and lifeguards often work alone.*

SUMMARY

Discuss with the learners that many hobbies and interests are associated with environmental working conditions, such as water skiing, tennis, and gardening. If the learners are going to choose an occupation by specifying the working conditions that they desire, they may have a large list of possible choices to pick from. In this lesson the learners have found that one occupation has many working conditions. Many occupations may also have the same working condition. Many people start thinking about jobs from the point of view of working conditions. To many, working conditions are an important consideration. To bring this point home, ask the learners how many would be willing to spend all the time except eating and sleeping time:

1. Outside
2. Inside
3. Sitting
4. Walking
5. Swimming

Now the learners have a little more background that will help them choose a job. Explain to the learners that in the next lesson they will consider the hazards of working. The class will participate in a simulation of hazardous working conditions which, if done wrong in real life situations, might cost the learner his life and the lives of many others. This will present some of the dangerous facts of several occupations. It is not intended to discourage the learners, but merely to point out that care should be taken when choosing an occupation.

ASSESSMENT PROCEDURES

DESCRIPTION

A completion item is used to assess achievement of the objective. The learner will list an example of an occupation in which the working condition listed previously would occur and describe the tasks of that occupation which make the working condition present. These will be written in Part II and Part III of the assessment chart used in Lesson 3. Part I should have been scored prior to beginning this lesson.

DIRECTIONS

The learner will read the item and list an example of an occupation for each working condition listed in Part I, and describe the tasks of that occupation which make the working condition necessary (see special considerations).

KEY

Instructor's satisfaction that the occupation listed is associated with the working condition and that the tasks described do relate the working condition and the occupation (see assessment item key - Lesson 3).

PHYSICALLY HAZARDOUS WORKING CONDITIONS

LESSON FIVE

CONCEPT

In occupations with hazardous working conditions, cooperation is also a necessary working condition.

PERFORMANCE OBJECTIVE

The learner will name those working conditions which may be physically hazardous and (for each working condition) give an example of an occupation in which it would occur and describe the tasks of that occupation which make the working condition hazardous.

LESSON TIME

80 minutes

RESOURCES REQUIRED

FOUND WITHIN LESSON	ACQUIRED BY INSTRUCTOR
Information sheet: *Hazards*	Twenty-five 2" x 8" construction paper strips
Assessment item	Broad-tip felt pen
Assessment item key	Large open area
	Balance beam or approximately ten feet of garden hose

RESOURCES REQUIRED (Continued)

FOUND WITHIN LESSON	ACQUIRED BY INSTRUCTOR
	Books
	Gym mat or four 12" x 12" cushions
	Five sets of pick-up sticks and/or jackstraws
	Large skein of yarn (bright color)
	Large work table

INSTRUCTOR PREPARATION TASKS

Obtain the following items:
1. Balance beam or approximately ten feet of garden hose
2. Gym mat or four 12" x 12" cushions
3. Five sets of pick-up sticks or jackstraws
4. Large skein of brightly colored yarn
5. Large work table
6. Broad-tip felt pen

Acquire books and group and tie them in various weights, sizes, and shapes as "loads" for the beam walkers to carry.

Write on the chalkboard hazardous conditions as follows:
1. Heights
2. Explosives
3. Fumes
4. Voltage

Review the *Hazards* information sheet.

Have the class set up for the activity "Hazards."

Clear an area of the classroom or make plans to set up a balance beam outside so a group of learners can participate in this activity.

Set up a large work table which is suitable for jackstraws and pick-up sticks. If a table is not available, clear another section of floor.

Duplicate one copy of the following items for each learner:

1. *Hazards*
2. Assessment item

Prepare twenty-five 2" x 8" strips of construction paper to be used in adding to the bulletin board "Working Conditions" during the lesson.

INSTRUCTIONAL PROCEDURES

INTRODUCTION

Explain to the class that in the last lesson they considered the importance of working conditions and their effect on the learners' choice of jobs. Point out that the learners experienced some of these working conditions in a class simulation of mass production. So far, the class has looked at everyday jobs that most people have. However, the learners should know from television, from the books they read, and from the newspaper, that there are many occupations whose working conditions are physically hazardous. Without proper training and a full understanding of the task, people could easily lose their lives and the lives of others. performing tasks in which the working conditions are physically hazardous.

After discussing with the class the physically hazardous working conditions in this lesson, they will simulate the dangerous conditions in an activity called "Hazards." Relate to the learners that after performing some of these activities they will discuss how occupations having physically hazardous working conditions could endanger not just one but many lives. Explain to the class that these occupations always have one other working condition in common. Teamwork and cooperation are essential. Advise the class that by the end of the lesson, they will have experienced that fact.

TASKS

Ask the learners to look at the chalkboard. Have one learner read the hazards listed.

Desired responses:

1. *Height*
2. *Explosives*
3. *Fumes*
4. *Voltage*
5. *Limited air*

Explain that each of these can contribute to a dangerous situation if not controlled.

Tell the learners you are going to read a story and they are to listen and identify the hazardous condition that may be present.

Read the following story:

FEARLESS FRANK

Frank was one of about 80 sailors assigned to the nuclear submarine Sounder. The submarine had been exploring the bottom of the Pacific Ocean for a long time. The air was not as fresh as it should be, but no one was worried. Soon the Sounder would surface and head for Hawaii for supplies.

While Frank was at his station, a voice came over the intercom. "Attention! Rig for settling on the bottom." A few seconds later, the Sounder pitched and rolled as it sank to the ocean floor. Frank nudged his neighbor.

"Hey, George, what's going on?"

"We can't surface until a ballast tank is fixed. One of the valves has been crusted over by barnacles. Toby and Kurt are putting on their Scuba gear now. They're going out to scrape the critters off."

About twenty minutes later Sounder was under way again. Frank turned to George and said, "It's lucky that we're not really deep. Toby and Kurt wouldn't have been able to go out and clear that valve. We might have been stuck down here for days!"

George smiled and nodded.

Ask what hazardous conditions could have faced the crew of Sounder.

Desired responses:

1. *Little air*
2. *Explosion*
3. *Fumes*

Explain that other occupations may have hazardous conditions, and ask the learners to name some and explain why they contribute to a dangerous situation.

Possible responses:

Physically hazardous working conditions	*Hazardous tasks*	*Occupation*
1. Involving great height	*May fall from the sixth story and be killed while cleaning windows*	*Window cleaner*
2. Involving explosives	*May detonate a bomb or ignite a stick of dynamite and be seriously injured or killed*	*Demolition expert in army, or for engineering company*
3. Involving noxious fumes	*May be wearing a leaky gas mask when examining chemicals, or breathe a gas and become suffocated by ruining the lungs and nasal passages*	*Mechanic or chemical worker*
4. Involving high voltage	*May be hit by a falling electrical wire and be electrocuted*	*Electrician*

Record each physically hazardous working condition and its occupation on 2" x 8" strips as they are named. (A learner may help with this task.) Mount them on the "Working Conditions" bulletin board under their respective headings - "Occupations" or "Working Conditions." Some, however, may already be listed. To avoid duplication, use the yarn to show that some occupations have many working conditions, some physically hazardous, and that many occupations have the same working conditions.

Explain to the learners that they are going to experience working conditions which are potentially hazardous. As the learners perform the activities, they should try to think of an occupation in which a similar working condition could be found. Also, they should explain the situation or task of the occupation which causes the occupation to be physically hazardous. (Have the activity centers set up before the class begins.)

Distribute the *Hazards* information sheet to each learner. Discuss each situation and ask a learner to demonstrate the correct procedure as it is explained. Then divide the class into pairs. Have the pairs gather into three groups. Group one will begin at the balance beam, group two will begin at the mats, and group three will begin at jackstraws.

The activities will be performed as follows:

The balance beam

The purpose of the balance beam is to give the learner the experience of having to walk with some ease in a confined area, with and without a load to carry. Each learner in that group will walk down the beam once without a load, once carrying one pile of books, and once carrying two piles of books, one in each hand.

It is important to stress to the learners that each learner stay to help his partner. If one should lose his balance, the partner will be there to "spot" for him, making sure the performer does not get hurt. The instructor should emphasize that without cooperation this activity is not possible. As soon as each partner has had his/her turn on the beam, and each has spotted the other, the pair may go to the next activity area.

The mats

The purpose of this activity is to test the ability to perform various feats of agility. Again it is important that "stunts" be performed in pairs, one child spotting while the other performs. Instructions are shown on the information sheet *Hazards* for the forward roll-to-stand, backward roll-to-stand, turk stand, one-legged dip, and the nose dive. As soon as each partner has tried each stunt and spotted each other, the pair may move to the third area.

Jackstraws

This activity stresses manual coordination and dexterity. The object of this game is to get a "straw" away from the tossed pile of "straws" without moving any of the other "straws." Again, the games may be played between the two partners. (The way the "straws" are tossed determines the length of the game and the skill required.)

Jackstraws are like pick-up sticks. They are made of a light material, such as balsa wood, and have shapes, such as a ladder, an ax, etc.

After the explanations and demonstrations are finished and all questions answered, direct the class to disperse to their assigned beginning activities.

After having performed these activities, reunite the class. Ask what some of the working conditions of the balance beam exercise were.

Possible responses:

1. *Walking above the ground*
2. *Walking on a small area*
3. *Working in a small area with a load to carry*

Then, ask what kind of occupation would have these working conditions and describe the hazardous tasks of each.

Possible responses:

Occupation	*Hazardous tasks*
1. Window cleaner	*Balancing on a bosun's chair while working on skyscraper's windows on the tenth story*
2. Sign painter	*Painting signs on huge billboards on top of a high building*
3. Roofer	*Putting shingles on the roof of tall buildings, carrying hot tar while keeping balance on a roof peak*
4. Construction worker	*Building tall buildings, walking on nothing but the girding beams on the ninth floor, using a jackhammer on the ninth floor of a building under construction*

Examine the tumbling exercise with the class by asking what the working conditions of the stunts were or might be.

Possible response:

Moving quickly under, over, or around obstacles

Ask what occupations might have these working conditions. Direct the learners to describe the hazardous tasks of each.

Possible responses:

Occupation	*Hazardous tasks*
1. Detective	*Chasing a criminal or being chased by a criminal and possibly being shot*
2. Acrobat	*Doing stunts on a high wire with or without a net or on a trapeze*
3. Karate expert	*Demonstrating or defending himself with karate*
4. Fireman	*Rescuing people from burning buildings or trees and other places, putting out fires*

Ask what physical demands were evident in jackstraws.

Possible responses:

1. *Coordination of the eye and hand*
2. *Moving in small spaces*

Ask what occupation would require these skills, and have the learners describe the hazardous tasks of each.

Possible responses:

Occupation	*Hazardous Tasks*
1. Bomb disarmament squad	*When disarming bombs and other explosives, the men could be hurt.*
2. Electrician	*When wiring a building, an electrical wire may fall on the electrician.*

Stress the potential physical hazards of these working conditions. Point out to the learners that had the activities been real tasks, some disasters may have taken place. Ask the learners to answer the following questions by raising their hands:

1. *How many fell off the roof, or off the sign?*
2. *How many got caught by the fire or fell off the trapeze or were hit by the chief's bullet?*
3. *How many times did the bomb explode?*

SUMMARY

Explain to the class that the learners have just begun to tap the sources of possible working conditions. The ones they have experienced in this lesson are among the kinds that are most common. Point out that to perform each activity well, it takes practice, training, and cooperation from fellow learners. Point out that in all occupations with physically hazardous working conditions, there are many steps taken to prevent accidents. As an item of interest, ask what some of the safety precautions are for several of the physically hazardous working conditions.

Possible responses:

1. *Great heights - safety lines, parachutes*
2. *Explosives - metal screens, protective suits*
3. *Noxious fumes - gas masks*

Stress with the class that training is important, especially in jobs with physically hazardous working conditions. But cooperation is most important between teammates.

Advise the class that in the next lesson they will put together everything they have learned so far. They will compose a job situation involving physical demands, working conditions, and the worker. By composing a job situation, the learners will be able to form an opinion of what they would like or dislike in both working conditions and in physical demands of the job.

ASSESSMENT PROCEDURES

DESCRIPTION

A completion item is used to assess achievement of the objectives. The learner will list four working conditions which may be physically hazardous and, for each working condition, give an example of an occupation in which it would occur and describe the tasks of the occupation which make the working conditions hazardous. Use Parts I, II, and III of the assessment chart.

DIRECTIONS

The learner will read the item and list four physically hazardous working conditions. For each physically hazardous working condition the learner will give an example of an occupation in which it would occur and describe the tasks of the occupation which make the working condition necessary. Use Parts I, II, and III of the assessment chart.

KEY

Instructor's satisfaction (see the assessment item key).

ASSESSMENT ITEM

Name____________

Date____________

Lesson 5

Directions:
Part I - Write four physically hazardous working conditions.
Part II - Write an occupation for each physically hazardous working condition.
Part III - Describe how the occupation has working conditions which are physically hazardous.

	PART I	PART II	PART III
	Physically Hazardous Working Conditions	Occupation	Description of Task(s) Which Makes the Working Condition Hazardous
1.			
2.			
3.			
4.			

ASSESSMENT ITEM KEY

Directions:
Part I - Write four physically hazardous working conditions.
Part II - Write an occupation for each physically hazardous working condition.
Part III - Describe how the occupation has working conditions which are physically hazardous.

	PART I	PART II	PART III
	Physically Hazardous Working Conditions	Occupation	Description of Task(s) Which Makes the Working Condition Hazardous
1.	Involving noxious fumes	Chemical worker	A leaky gas mask may be worn while testing a chemical compound.
2.	Involving great height	Window cleaner	The window cleaner may slip from the bosun's chair from the sixth story of a building while cleaning the windows.
3.	Involving explosives	Demolition expert for engineering company	A charge of dynamite may have a delayed fuse unknown to the man in charge.
4.	Involving high voltage	Electrician	An electrical wire may fall on the electrician and electrocute him/her.

Note: Accept any other reasonable response.

HAZARDS

INFORMATION SHEET

1. The Balance Beam

   a. The performer approaches the beam from the end.
   b. The performer will mount the beam by placing one foot on the beam.
   c. The performer will place the other foot on the beam in front of the first.
   d. The spotter will walk on the ground beside the performer, ready to assist the performer should he need help.
   e. The performer will walk the whole length of the beam but will not get off.
   f. The performer will turn around.
   g. The spotter will give the performer one load of books.
   h. The performer will walk the whole length of the beam with one load but not get off.
   i. The spotter will walk beside the performer to the end of the beam.
   j. The spotter will give the performer a second load of books.
   k. The performer will walk the whole length of the beam with two loads but not get off.
   l. The spotter will walk beside the performer.
   m. At the end of the beam the spotter will take the two loads from the performer.
   n. The performer may dismount (get off) the balance beam.
   o. The partners will trade duties. The performer is now the spotter; the spotter is now the performer.
   p. Begin again at "a."

2. The Mat

   A. Forward Roll-to-Stand
      (1) Each performer should have enough free space so that when turning with arms stretched out, he/she will touch no one.
      (2) The performer will begin with the forward roll-to-stand.
         (a) Squat at the end of the mat.
         (b) Place hands on mat just in front of feet.
         (c) Arms should be outside of legs.
         (d) Tuck chin into neck.
         (e) Round the back.

- (f) Push off with feet.
- (g) Move body over head, protecting head by pushing with hands.
- (h) Roll on back until on feet.
- (i) When on feet, stand up.

(3) The spotter will watch to see that the performer does not roll crooked into another performer.
(4) The spotter will also aid the performer if he should get into difficulty.
(5) After the stunt is finished, spotter and performer trade duties and begin at "a."

B. Backward Roll-to-Stand
- (1) Each performer should have enough space so that when turning with arms stretched out, he will touch no one.
- (2) The performer will do a backward roll-to-stand.
  - (a) Sit on the edge of the mat.
  - (b) Put hands at the shoulders, palms up.
  - (c) Push off with the feet.
  - (d) Tuck head.
  - (e) Roll backward.
  - (f) Bring knees to chest.
  - (g) Put hands flat on the mat.
  - (h) Pull feet over head.
  - (i) Push off the mat with hands to protect head.
  - (j) Drop feet to the mat.
  - (k) When on feet, stand up.
- (3) The spotter will watch to see that the performer does not roll crooked into another performer.
- (4) The spotter will also catch the performer when he has completed the roll or when he is in any difficulty.
- (5) After the stunt is finished, spotter and performer trade duties and begin at "a."

C. Turk Stand
- (1) Each performer should have enough space so that when turning with arms stretched out he will touch no one
- (2) The performer will do a turk stand.
  - (a) Stand with legs crossed and arms crossed.
  - (b) Keep legs and arms crossed while easily sitting down.
  - (c) Keep body weight over feet and stand up quickly.

(3) The spotter will watch to see that the performer does not tumble into another performer.
(4) After the stunt is finished, the spotter and the performer will trade duties and begin at "a."

D. One-Legged Knee Dip
(1) Each performer should have enough space so that when turning with arms stretched out he will touch no one.
(2) The performer will do a one-legged knee dip.
  (a) Stand with right side toward mat.
  (b) Hold right ankle behind back with left hand.
  (c) Bend the left knee slowly.
  (d) Touch right knee to the mat.
  (e) Stand up again.
  (f) Switch to the other knee and turn so that left side is toward mat.
  (g) Hold left ankle.
  (h) Bend right knee slowly.
  (i) Touch left knee to mat.
  (j) Stand up again.
(3) The spotter will watch to see that the performer does not tumble into another performer or lose his balance and fall.
(4) After the stunt is finished, spotter and performer trade duties and begin at "a."

E. Nose Dive
(1) Each performer should have enough space so that when turning with arms stretched out, he will touch no one.
(2) The performer will do a nose dive.
  (a) Fold a piece of paper to stand about 11 inches high. (Fold an 8½" x 11" piece of paper lengthwise.)
  (b) Stand on one leg.
  (c) Put the other leg and both arms out for balance.
  (d) Bend over slowly.
  (e) Pick up paper with teeth.
  (f) Stand up again.
  (g) Repeat on other leg.
(3) The spotter will watch to see that the performer does not tumble into another performer or lose his balance and fall.
(4) After the stunt is finished, spotter and performer will trade duties and begin at "a."

3. Jackstraws (Pick-up Sticks)

   a. Either partner may pick up all the "straws" in one hand.
   b. Toss the "straws" slightly into the air.
   c. Let the "straws" fall as they will.
   d. Taking turns, try to get as many "straws," one at a time, as possible.
   e. Do not move any other "straw" than the one being taken.
   f. If more than one "straw" is moved, the turn is lost.
   g. The test is done when all the "straws" are picked up.
   h. The winner is the one with the most "straws."

THE WORKER'S WORLD

LESSON SIX

CONCEPT

An overview of the physical demands and working conditions of the worker's world is acquired.

PERFORMANCE OBJECTIVE

Given a list of occupations, the learner will name two working conditions and two physical demands of each.

LESSON TIME

85 minutes

RESOURCES REQUIRED

FOUND WITHIN LESSON	ACQUIRED BY INSTRUCTOR
Assessment item	12" x 18" art paper
Assessment item key	Thumbtacks or pins
	Bulletin board space (optional)
	Crayons or colored pencils

INSTRUCTOR PREPARATION TASKS

Duplicate one copy of the assessment item for each learner.

Acquire the following items:

1. 12" x 18" art paper
2. Thumbtacks or pins
3. Crayons or colored pencils
4. Bulletin board space to display "career strips" (optional)

INSTRUCTIONAL PROCEDURES

INTRODUCTION

Explain to the class that they have discussed the physical demands, such as lifting heavy objects or bending, of several occupations. They have also dicussed working conditions, such as working at great heights or working with poisonous gases, of several occupations.

In the last lesson they discussed those occupations that have physically hazardous working conditions. Because of the amount of training, the danger factor, and the cooperation needed among workers, people who choose these occupations must be aware of safety factors.

Explain that in this lesson they will consider all parts of a job by assembling as many facts as possible about physical demands and working conditions. In this way they will acquire a complete view of the world of work. They will be better equipped to choose an occupation they will enjoy.

TASKS

Briefly review with the class the physical demands, the working conditions, and the occupations by directing the learners' attention to the bulletin board which has been maintained throughout the lessons. This will be used as a reference for ideas and suggestions for an art project. Explain to the class that projects will relate what the learners think would be the ideal occupational situation.

Tell the learners they are going to design a "career strip." Tell them it will be like a comic strip, except it will be true. Ask the learners what they will have to include in their "career strip."

Desired responses:

1. *Dialogue*
2. *Caricature pictures*

Hand out the art paper to the learners. Then direct the learners to write a career strip of approximately ten frames. Have the learners fold the 12" x 18" art paper into twelve squares:

1. Fold the paper in half lengthwise.
2. Fold the paper in half widthwise.
3. fold the paper in thirds.

Explain that the learners should include in their career strip the occupation, two physical demands, and two environmental working conditions which may include physically hazardous working conditions. For example:

1. Occupations - cowboy
2. Physical Demands - much bending and lifting great weight
3. Working Conditions - all kinds of weather; dirty

Allow the learners forty minutes to draw the career strip. Then discuss the career strips together in class. The learners should describe the actions drawn, as well as reading the dialogue. Ask the class to determine what the physical demands and working conditions are of each career strip.

After the class has discussed the career strips, collect them and mount them on the bulletin board for later enjoyment. (This may be optional if bulletin board space is limited.)

Explain to the class that they have discussed occupations in light of the physical demands and the environmental and hazardous working conditions. Point out to the class that in this lesson they chose an occupation and supplied the physical demands and working conditions characteristic of it. The learners also saw that the same physical demand or working condition fit many occupations.

Now introduce the game "Tennets." Explain that the game will see not only that the same physical demands and working conditions fit many occupations, but they will also see how varied occupations can be.

Continue by explaining that in this game of "Tennets" they will supply the physical demands and the working conditions for specified occupations. They will also be asked to name an occupation that has similar physical demands and working conditions to the specified occupations. Then they will be asked to supply the name of an occupation that has similar physical demands and working conditions to the specified occupations. Then they will be asked to supply the name of an occupation which differs in physical demands and working conditions. They will do this by completing the following sentence.

> A (occupation) is one who is willing to (working condition) and able to (physical demand). So can a (who), but perhaps not (who).

Write the above sentence on the chalkboard for the learners to work from.

To give the class an idea of how to play "Tennets," start with this example:

> A Superman is one who is willing to: (Working Conditions)
>
> 1. Fight for law and order
> 2. Endure a grouchy boss
> 3. Protect the weak and defenseless
> 4. Perform humanitarian deeds
>
> and who is able to: (Physical demands)
>
> 1. Be faster than a flying bullet
> 2. Be stronger than a speeding locomotive
> 3. Leap tall buildings with a single bound
> 4. Be bullet proof
>
> Such as: A lawyer
> Not: A lion tamer

Explain to the class that to begin the game, Team A challenges Team B by choosing an occupation for which Team B must supply the fill-in informatin for the sentence on the chalkboard.

Each learner must take a turn. If someone cannot think of a filler, it is a pass for zero points. Each blank may have four fillers. This is the scoring:

1 filler - 1 point
2 filler - 2 points
3 filler - 4 points
4 filler - 6 points

Explain to the class that for "Superman" the instructor received 14 points. For wrong fillers there are zero points. If there is a dispute over a filler, the learner should explain his answer. For no answer the team loses a turn but does not lose points. No scoring is negative. As mentioned before, the instructor might start with those occupations already listed on the bulletin board. Each team takes turns challenging and filling in the statements.

Conclude by saying the end of "Tennets" comes when one team reaches at least 150 points or when the instructor wishes. By the end of the game the learners should be able to pull all the elements of an occupation together. They should know what to expect from physical demands and working conditions.

SUMMARY

Explain to the class that the purpose of these lessons was to introduce the world of work to the learners and to prepare them somewhat for the future. To do this the learners discussed demands made upon themselves. Point out to the class that the learners have discovered what they could and could not do and what they liked and disliked doing through simulated activities. This knowledge was applied to various occupations. The learners found that one physical demand described several occupations. If there was one physical demand the learner wished to avoid, he/she found that, therefore, several occupations had to be avoided. If there was a particular physical demand that pleased the learner, he/she discovered that there were several occupations to choose from.

Continue that the next part of the world of work which was discussed was working conditions. Again the learners found, through class simulation, that there were some working conditions that they liked better than others and some in which they performed better. Occupations were matched with working conditions so the learners could find occupations whose working conditions were agreeable. They could also eliminate those occupations whose working conditions were disagreeable.

Finally the learners looked at both the physical demands and the working conditions for the same occupations. This drew a more complete picture of the world of work. It gave the learners some ideas of what a worker should expect from an occupation. It also described briefly what the occupation would expect from its workers.

ASSESSMENT PROCEDURES

DESCRIPTION

A completion item is used to assess achievement of the objective. Given four occupations, the learner will name two working conditions and two physical demands of each. Use Part II and Part III of the assessment chart.

DIRECTIONS

The learner will read the item and, given four occupations, will name two working conditions and two physical demands of each. Use Parts II and III of the assessment chart.

KEY

Instructor's satisfaction (see assessment item key).

Name____________________

Date____________________

ASSESSMENT ITEM

Lesson 6

Directions:

Part II - Write two physical demands for each occupation.
Part III - Write two working conditions for each occupation.

	PART I	PART II	PART III
	Occupation	Physical demand	Working Conditions
1.	Cowboy	1. __________ 2. __________	1. __________ 2. __________
2.	Doctor	1. __________ 2. __________	1. __________ 2. __________
3.	Musician	1. __________ 2. __________	1. __________ 2. __________
4.	Farmer	1. __________ 2. __________	1. __________ 2. __________

ASSESSMENT ITEM KEY

Directions:
Part II - Write two physical demands for each occupation.
Part III - Write two working conditions for each occupation.

	PART I	PART II	PART III
	Occupation	Physical demand	Working conditions
1.	Cowboy	1. Much use of arm muscles 2. Lifting heavy objects	1. All kinds of weather 2. Dirty
2.	Doctor	1. Great manual dexterity 2. Much standing	1. Air conditioned office 2. Very clean
3.	Musicians	1. Sitting for long periods of time 2. Great manual dexterity	1. Crowded 2. Noisy
4.	Farmer	1. Much bending 2. Much use of arm muscles	1. Lonely 2. All kinds of weather

Note: Accept and reasonable response

APPENDIX A

INSTRUCTIONAL STRATEGY GUIDES

DEMONSTRATION STRATEGY

A demonstration is "a method or a process of presenting or establishing facts."[1] A demonstration is "the procedure of doing something in the presence of others either as a means of showing them how to do it themselves or in order to illustrate a principle; for example, showing a group of students how to set the tilting table on a circular saw or how to prepare a certain food product, or performing an experiment in front of the class to show the expansion of metals under heat."[2]

A. Use of Demonstrations

1. To illustrate an important principle
2. To provide instruction in how to perform a particular task
3. To indicate safe operating procedures
4. To augment lecture and/or discussion sessions
5. To provide for breaks in instructional routines

B. Instructor Preparation

1. Determine the objectives of the demonstration. Make sure that a legitimate instructional need is served by the demonstration.

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[1] Carter V. Good (ed.), Dictionary of Education (New York: McGraw Hill Co., 1959), p. 161.

[2] Ibid.

2. Prepare learners for the demonstration.
    a. Introduce and use any new terminology before presenting a class demonstration.
    b. Provide motivational activities which lead into the demonstration.
    c. Announce the demonstration a class period early and assign any reading necessary to acquaint each learner with new materials and/or processes.
    d. Announce any safety precautions for which the learner should prepare in advance. *Example:* Students must furnish protective goggles.
3. Secure or develop the necessary apparatus, materials, audio visual materials, and specimens needed for the demonstration.
4. If necessary, obtain parental consent to perform the demonstration.
5. If necessary, solicit outside help to successfully perform the demonstration. Incorporate student help when possible.
6. Provide the necessary accommodations for handicapped learners to participate in the activity.
7. Provide the necessary accomodations for visitors to the classroom.

8. If necessary, inform your principal or other administrator.

9. Plan any follow-up activities necessary to reinforce the information delivered in the demonstration.

10. Practice the demonstration.
    a. Familiarize yourself with all steps in the demonstration.
    b. Set a tentative time limit for the demonstration and, when necessary, for the individual parts of the demonstration.
    c. Prepare an outline to follow when presenting the information to the learners.

11. Prepare a good introduction and conclusion for the demonstration. A carefully prepared introduction will ensure a good beginning and set the tone for an organized demonstration. The conclusion should contain summary statements and any information necessary for smooth transition to follow-up activities.

C. The Demonstration

1. Inform learners whether or not they are to take notes.
2. Make sure everyone can see and hear.
3. Involve as many students as possible.

4. Talk to the learners and watch for obvious feedback signs.
5. Use audio-visual material whenever possible. Simple, easily-prepared visuals can provide structure and organization for the presentation.
6. Move at a steady pace; watch the time; use the prepared outline to complete the demonstration.

The time an instructor spends preparing a demonstration is rewarded with learner enthusiasm. Well planned demonstrations are always fun, but do not forget that the instructor's proficiency is the center of attention.[3] Therefore, if a demonstration is to be used as a learning experience, prior planning is a necessity.

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[3] W. James Popham and Eva L. Baker, Systematic Instruction, (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1970), p. 102.

DISCUSSION STRATEGY

Techniques of discussion are often designed as learning procedures. Some discussion sessions are "characterized by adherence to a topic, question, or problem about which the participants sincerely wish to arrive at a decision or conlusion."[4] During such sessions group discussion is usually controlled by its leadership. Other discussion sessions provide for "group discussion that moves freely and adjusts to the expressed interests and participation of the members."[5] This type does not call for any specific discussion procedure of fixed outcome. Activities described as discussion sessions may range from very rigid sessions to periods that appear more therapeutic than instructional.[6] Therefore, the fundamental consideration before choosing discussion as a teaching technique should be the objective(s) of the lesson.

Discussion strategies are not difficult to comprehend, but the inexperienced instructor may find that discussion as a teaching technique is one of the most difficult to implement.

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[4] Carter V. Good (ed.), Dictionary of Education, (New York: McGraw Hill, 1959), p. 178.

[5] Ibid.

[6] W. James Popham and Eva L. Baker, Systematic Instruction, (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1970), p. 97.

A. Use of Discussion Techniques[7]

   1. To exchange information
   2. To form attitudes
   3. To make decisions
   4. To release tensions

B. Discussion Strategies

   1. Before beginning a discussion, make sure that the learners have sufficient background information. This can be provided through previous lessons or preparatory information in the same lesson.
   2. Prepare a list of questions to be asked, along with typical learner responses. (See Classroom Question Classificatin Chart.)
      a. Even in its simplest form a list of prepared questions helps prevent moments of confusion which destroy the effects of a good discussion.
      b. If a variation of an instructor-directed discussion is chosen, questions should be prepared and written for use by small groups or groups demonstrating opposing viewpoints.

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[7] J. Jeffrey Auer and Henry Lee Eubank, Handbook for Discussion Leaders, (New York: Harper and Row, 1947), pp. 8-9.

3. Advise learners to exchange ideas with other learners as well as with the instructor.
4. Tell learners that participation in a discussion carries a commitment to listen to and respect other's opinions.
    a. Respect of another opinion means accepting that opinion as a valid belief of another person.
    b. Laughter and scoffing at an opinion different from one's own tends to change a discussion session into an argument.
5. No one should be forced to participate, but everyone should have the opportunity to speak if he desires.
6. The instructor and/or discussion leader should compliment desirable behavior displayed during the discussion.
7. Make the discussion as informal as possible.
8. Arrange chairs in a comfortable manner, preferably in a circle.
9. If the discussion is to be in small groups, inform the participants to keep a reasonable noise level.
10. The instructor and/or discussion leader should direct the session with enthusiasm.

11. Do not make a discussion session too lengthy. Terminate it when all opinions have been heard.

12. If a discussion is to have a leader other than the instructor, that leader should be chosen and prepared in advance.

13. A summary statement should be provided to conclude an organized discussion. This task can be performed by the instructor or the discussion leader.

C. Discussion Leader Responsibilities

1. Ask questions which will elicit reactions, opinions, or conclusions.
2. Do not answer too many of your own questions.
3. Vary the approach to asking questions. *Example:* Ask questions to the group. Ask for a volunteer. Ask questions of a particular individual.
4. Inject differing points of view.
5. Elicit explanations from proponents of differing points of view.
6. Encourage group interplay by calling for reaction to statements made by participants.
7. Monitor the discussion to steer away from monopolizers.
8. If necessary, clarify what is said.
9. Occasionally summarize what has been said before considering other aspects of the problem. Provide

enough new or transitory material to enable the discussion to continue.

10. It might be necessary to play the role of "devil's advocate" to stimulate discussion.

11. The discussion leader and/or instructor should value and accept all contributions made by the learners and should be a model of expected behavior.

D. Variation of Group Discussion

1. Panel Discussion

    a. A panel usually has three to six learners, including a chairman. Interplay between the panel members consists of agreement, support, disagreement, elaboration of points, and presentation of differing viewpoints.

    b. More intense planning is necessary to successfully conduct a panel discussion because few learners have the expertise to discuss a topic in front of the rest of the class.

    c. The chairman performs the responsibilities as listed in Section C.

    d. After the panel has explored the topic under consideration, the chairman can open the discussion to the class. Learners can ask questions or make comments to specific panel members, or a total panel response to a question could be requested by the chairman.

2. Symposium[8]
    a. A symposium consists of several persons (guests, learners, etc.) who hold differing points of view regarding the topic under consideration.
    b. Each participant is given a chance to briefly state his point of view; a moderator, preferably a student, then opens the meeting to the group.
    c. The symposium is particularly useful as a vehicle for committee reports.
    d. When the symposium is used as a classroom tool, those speaking should be encouraged to provide charts, diagrams, or other audio-visual material to enhance their presentations.
3. Interview Technique
    a. The interview technique is a method used in a conference between an interviewer(s) and a respondent. Direct questioning is used to draw information from the respondent.[9] The

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[8] James W. Brown, Richard B. Lewis, and Fred F. Harcleroad, A-V Instruction - Materials and Methods, (New York: McGraw-Hill Book Co., 1959), p. 311.

[9] Good, op. cit., p. 298.

person from whom information is sought can be a learner or classroom visitor. The interviewer can be a learner, the instructor, or a small group including both learners and instructor.

b. Most of the important questions for which responses are sought should be decided upon by a general group discussion prior to the interview. It is also advisable to decide who will ask each question, especially if there are several interviewers.

c. After completing the formal interview, the session should be opened for class participation. The class can participate by questioning the respondent or by making further comments about certain points covered in the interview.

d. A useful variation of the interview session is one where two respondents are interviewed simultaneously. This enables interaction between the respondents, and often a question answered by one can be further developed by the other.

e. It is a good practice to have either the respondent or an observer provide closing remarks. This responsibility should be assigned prior to the interview.

f. It is often necessary to conduct an interview outside the classroom and report back to the class. The tape recorder is a very effective tool in such cases. The instructor should review the strategies of conducting an interview with those responsible to provide the learner with an interview form designed specifically for a particular interview.

4. 4. Brainstorming

a. Brainstorming is a variation of group discussion often used as a first step in solving a problem or accomplishing a group objective. Brainstorming has been described as a discussion technique "giving the mind the green light."[10]

b. A brainstorming session consists of accepting ideas, phrases, words, etc. from group participants, writing them on the chalkboard, evaluating each one before deciding on the most promising course of action.

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[10] Brown, Lewis, and Harcleroad, op. cit., p. 313.

   c. The session should be conducted on a positive basis. No suggestion should be rejected because of impracticality.

5. Discussion - Debate[11]
   a. Debate sessions can be best used as follow-up activities to small group discussions in which proposals with differing points of view have been identified.
   b. During a debate session, two or more speakers deliberately present opposing views to the same issue.
   c. No effort is made to reach a decision or to recognize common parts of differing views.
   d. The instructor should tell the class that differing views help identify important issues and/or alternative approaches to a problem.
   e. Some facsimile of formal debate procedures should be maintained. Each proponent should be given presentation time and time for rebuttal. Approximately equal time should be given each participant.

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[11] Good, _op. cit._, p. 312

f. Ideally, the debate session should end with a summation of the issue; however, if a solution or approach must be decided upon, the issue should be informed that such a vote will be taken at the conclusion of the debate session.

g. After the debate, the class should be given a chance to participate by asking questions or providing additional input on relevant issues.

NOTE: This discussion-debate variation is not a formal debate.

Variations and/or combinations of these discussion methods are unlimited. The instructor should choose and prepare the discussion session that will provide the best vehicle for reaching the objectives of a lesson.

QUESTIONING STRATEGY

Classroom questions are a typical activity. Questions can be very effective tools when used by an instructor who has planned his questioning strategy. Whether the questioning is done orally or is written, the following considerations could prove helpful.

A. Use of Questions

1. To stimulate student thinking
2. To elicit answers which can be used to check the utility of the instructional process
3. To attract attention to an important segment of a lesson

B. Questioning Strategies

1. The style and form of prepared questions should be determined by the course objective for which the question is written. If course objectives are written in behavioral terms (performance objectives), support questions are much more easily written.
2. The purpose of a question should be determined prior to its being asked.
3. Generally, an instructor should avoid questions that can be answered yes or no.

a. Bloom[12] classifies educational objectives, but questions can also be classified into six different categories ranging from knowledge of specifics to evaluation of theoretical concepts. It is generally considered better to initiate questions that require a judgment, the use of logic, or powers of reasoning. (See Classroom Question Classification Chart)

b. Use hypothetical situations and conditional questions such as What would happen if . . . ? and How could . . . ?

4. It is generally considered best to ask a question and then ask someone to respond rather than choosing someone to respond prior to asking a question.
5. Do not repeat questions. If a question and answer period is planned for a purpose, then all learners should be required to support the session with their undivided attention. Repeating a question will not require the learners to listen.
6. Do not repeat learner answers.

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[12] Benjamin S. Bloom (ed.), Taxonomy of Educational Objectives, Handbook I: Cognitive Domain, (New York: David McKay Co., Inc., 1956), p. 18.

a. Encourage the learner to speak loudly and clearly.

b. The instructor may wish to repeat an answer and add or delete essential information in order to stimulate discussion, thought, and/or further learner questions.

7. Incorrect answers should always be treated as incorrect answers, but tact should be used in all such situations. Consider the source of incorrect responses before refuting them. Individual differences require that each response be handled as a unique situation. Some individuals require "soft" treatment; others need a firm response.

8. Answers can be grammatically corrected, even though the answer is empirically correct. A spontaneous judgment should be made before correcting the grammatical structure of a learner's response. In some cases, it might be more damaging to the learner to be grammatically corrected than it would be for the group to be exposed to grammatical mistakes.

An instructor can stimulate almost any thought pattern desired by making effective use of questions. Some instructors may be able to spontaneously initiate questions of quality, but most instructors need to spend time preparing questions and typical responses. *Exploring this topic should* produce many sources of typical questions and strategies for using them.

APPENDIX B

SUPPLEMENTARY ACTIVITIES FOR LESSON 2

JUST A-LOOKIN' FOR A HOME

Just a-lookin' for a home, Just a lookin' for a
home, Just a-lookin' for a home.——

The first time I seen the boll weevil,
He was settin' on the square;
The next time I seen the boll weevil
He had all his family there.

Chorus: Just a-lookin' for a home.

And the farmer took the boll weevil,
And buried him in hot sand;
The boll weevil say to the farmer,
"I'll stand it like a man."

Chorus: This'll be my home.

Then the farmer took the boll weevil
And left him on the ice;
The boll weevil say to the farmer,
"This is mighty cool and nice."

Chorus: This'll by my home.

The farmer took the boll weevil
And fed him on paris green;
The boll weevil say to the farmer,
"It's the best I ever seen."

Chorus: This'll be my home.

The boll weevil say to the farmer,
"You better let me alone;
I et up all your cotton'
And now I'll start on the corn."

Chorus: I'll have a home.

The merchant got half the cotton,
The boll weevil got the rest;
Didn't leave the poor old farmer
But one old cotton dress.

Chorus: And it's full of holes.

The farmer say to the merchant,
"I ain't made but one bale,
But before I'll give you that one,
I'll fight and go to jail."

Chorus: I'll have a home.

If anyone should ask you
Who was it made this song,
Tell him 'twas a poor farmer
With a pair of blue duckin's on.

Chorus: Ain't got no home.

Miscellaneous verses:

The first time I seen the boll weevil
He was on the western plain.
The next time I seen the boll weevil
He was ridin' a Memphis train.

The first time I saw the boll weevil
He was runnin' a spinnin' wheel.
The next time I saw the boll weevil
He was ridin' in an automobile.

The farmer took the boll weevil
And sent him up in a balloon.
The boll weevil say to the farmer,
"I'll see you again next June."

The farmer took the boll weevil
And throwed him in the sand.
He put on the farmer's overcoat
And stood up like a natural man.

Possible physical demands:

*1. Bending the back
*2. Pushing with the arms
*3. Lifting with the arms
*4. Digging with the hands
5. Clenching fist
6. Punching with the arms
7. Running
8. Lifting great weight
9. Pushing with arms
10. Picking up cotton and putting it in a large bag

*Instructor will write these on the chalkboard.

SUPPLEMENTAL ACTIVITY (Continued)

Lesson 2

The instructor should write only those physical demands which are starred. Also add the 2" x 8" song title to the bulletin board.

The insturctor should briefly explain the background of the song "Just A-Lookin' For a Home" asking first what occupation this song describes:

Possible response: Farmer

This song reflects the fear cotton farmers had of the boll weevil. The boll weevil is a beetle from Mexico that attacks the young cotton plants. With its long snout, it bores into the cotton boll and lays it eggs. The eggs hatch into grubs which eat the cotton boll (the white part) and its seed. If the cotton boll is eaten, there is nothing to harvest. Harvesting, then, was done by hand. The harvester would pick the cotton boll, separate it from the seeds, and put it in a large bag which hung from his shoulders. After that, it would be pressed into bales, wrapped in cloth and tied.

Now the instructor should continue discussing "Just A-Lookin' For A Home," matching the tasks of the song to the physical demands under column I. Not all physical demands have been written on the chalkboard.

Through a close examination the others may be discovered. Ask the learners, where the physical demands are suggested.

Possible response:

	Physical Demands
Verse 3 - buried	*Bending the back* *Pushing with the arms* *Lifting with the arms* *Digging with the hands*
Verse 8 - fight	*Clenching* *Punching with the arms* *Running*
"..made but one bale.."	*Lifting great weight* *Pushing with arms* *Picking up cotton and putting it in a large bag* *Bending over*

SUPPLEMENTAL ACTIVITY
(Continued)

A few of these physical demands would also be found in other jobs on any farm - not just a cotton farm. Ask what other farm tasks fit these physical demands.

Possible response:

Physical Demands	*Tasks*
Bending the back—	*Pulling weeds, hoeing* *Inspecting young plants*
Lifting with the arms—	*Lifting sacks of seed, fertilizer, insecticide to put into various machines* *Lifting gear onto the wagon*
Pushing with the arms—	*Getting livestock in place*
Clenching the fist—	*Hand-milking cows, goats, etc.*
Running—	*To protect farm equipment or livestock in stormy weather to prevent calamity - fire, flood, etc.*

After fully discussing this song, the instructor should choose a learner to write these physical demands on 2" x 8" construction strips and the occupation of this work on 2" x 8" strips to be mounted on the bulletin board. Then the instructor may go on to the next choice.

JOHN HENRY

When John Henry was a little baby,
Sitting on his daddy's knee,
He grabbed a hammer and a little piece of steel,
Said: "This hammer'll be the death of me, oh Lord,
This hammer'll be the death of me.

Well, the captain said to John Henry,
"I'm gonna bring that steam drill around,
I'm gonna take that steam drill out on the job,
I'm gonna whop that steel on down, oh Lord,
Gonna whop that steel on down."

John Henry said to his captain:
"A man ain't nothin' but a man,
But before I'll let your steam drill beat me down,
I'll die with the hammer in my hand, oh Lord,
Die with the hammer in my hand!"

John Henry said to his shaker,
"Now, shaker, why don't you sing?
"Cause I'm throwing twelve pounds from my hips on down,
Just listen to that cold steel ring, oh Lord,
Just listen to that cold steel ring."

John Henry said to his shaker,
"Shaker, you'd better pray,
If I miss that little piece of steel,
Tomorrow'll be your buryin' day, oh Lord,
Tomorrow'll be your buryin' day."

The man that invented the steam drill;
He thought he was mighty fine.
But John Henry he made fourteen feet,
While the steam drill only made nine, oh Lord,
The steam drill only made nine.

John Henry hammered on the mountain,
Till his hammer was striking fire.
And he drove so hard he broke his poor heart,
And he died with his hammer in his hand, oh Lord,
He died with his hammer in his hand.

They carried John Henry to the graveyard,
And they buried him in the sand,
And every locomotive comes rolling by,
Says, "There lies a steel drivin' man, oh Lord,
There lies a steel drivin' man."

SUPPLEMENTAL ACTIVITY
JOHN HENRY
(Continued

Lesson 2

Now you've heard big John was born in Texas,
And you've heard he was born in Maine.
Well, I don't give a damn where that poor boy was born,
He was a steel drivin' man, oh Lord,
He was a steel drivin' man.

Possible physical demands:

1. Clasping with the hands
2. Lifting with the hand and wrist
*3. Twisting at the waist
*4. Pulling with the arms and shoulders
*5. Bending and straightening the legs slightly
6. Rotating arms in a back swing
*7. Lifting a slight weight repeatedly

*Instructor will write these on the chalkboard.

The instructor should write on the chalkboard those physical demands which are starred. Also add the 2" x 8" title to the bulletin board.

After the learners have established the correct heading, the instructor should briefly explain the background of "John Henry," asking first what occupation the song describes.

Possible response: steel driver

John Henry was a steel driver. Before the days of power tools, much work was done by the strength of the arm. In John Henry's case, he did what a power drill does today. He drove steel rods into the walls of rock when building a tunnel - usually for the railroad. He used a twelve pound hammer while a man held the steel rod steady for him. This man holding the rod was called a shaker. The song "John Henry" describes this work and a famous contest between John Henry and a steam drill.

John Henry won, but he expended himself completely in the process.

Now the instructor should continue discussing "John Henry," matching the tasks of the song to the physical demands. Not all the physical demands have been written on the chalkboard. Through close examination of "John Henry" the others may be discovered. To be sure, ask if all the physical demands are on the chalkboard.

Possible responses:

Clasping with the hand should be up there.

Ask why.

Possible response:

That is the physical demand of "...grabbed a hammer...".

Ask if there are any more physical demands for "...grabbed a hammer..."

Possible response:

Yes, lifting with the hand and wrist is another physical demand.

SUPPLEMENTAL ACTIVITY
(Continued)

The following is a list of physical demands and the tasks which they describe from "John Henry":

Physical Demands	Tasks
Clasping with the hand— Lifting with the hand and wrist	Verse 1: "grabbed a hammer..."
Twisting at the waist— Pulling with the arms and shoulders— Grasping with the hands— Bending and straightening the legs slightly— Rotating arms in a backswing— Lifting a slight weight repeatedly—	Verse 4: "...throwing twelve pounds from my hips on down..."

After fully discussing the song, the instructor should choose a learner to write these physical demands on the 2" x 8" strips and the occupation of this song on a 2" x 8" strip. These will be mounted on the bulletin board. Then the instructor may go on to the next choice.

STEEL LAYIN' HOLLER

Awright, awright.
Ev'rybody get ready.
Come on down here, come on, boys
Bow down.

Awright, up high.
Awright, throw 'way.

Awright, le's move on down 'n' git another one.
Awright, bow down.
Awright, head high,
Throw 'way.

Awright, da's awright now.
Move on down ag'in.
Bow down.
Up high.
Throw 'way.

Come on down here, boys, come on down now, come on now.
Now, boys, now, stop.
An' I want you to listen at me, now.
I'm gonna tell you a sad warnin' now. (Don' git hurt.)
Bow down ea—sy, boys.
Head high, boys.
Throw it away.

Come on down here, boys, come on down now, come on now.
Now, boys, now, stop.
When I git dis las' one,
I'm goin' home to Julie an' tell her what I have made
    by dis hard labor.
Bow down ea—sy, boys.
Head high, boys.
Throw it away!

Possible physical demands:

*1. Bending of the back
*2. Pulling up with the arms
*3. Pushing with the arms
*4. Grasping with the hands
5. Pushing with the legs (while lifting a great weight)
6. Walking with a great weight
7. Holding a great weight with shoulder strength
8. Flexing wrists while changing position of great weight
9. Squatting with feet

*Instructor will write these on the chalkboard.

The instructor should write only those physical demands which are starred on the chalkboard. Also add the 2" X 8" title to the bulletin board.

The instructor should briefly explain the background of "Steel Layin' Holler", asking first what occupation this song describes.

Possible response:

Rail-layer

This song is exactly what the title syas it is - a song that directs the men in tossing steel rails on the ground for the laying of new track. In American it sounds like this:

All right, All right
Everybody get ready
Come on Down here, come on boys.

At this point the men gather around the end of the rail.

Bow down

The men bend over and take hold of the rail.

All right, up high

The men lift the rail up chest high.

All right, throw away

The men throw the rail off the car with a heave.

The whole of the song repeats the procedure over and over. The fact that latter verses become more persuasive may mean the men had to be cajoled into "...dis hard labor..." The person calling out the song was the foreman of the steel-laying gang. The men were expected to unload the rails from a flat car. Then they would have to line the rails up on the ties. Each rail weighs nearly two tons, requiring the strength of 14 men. A foreman had to have a good singing voice - not only to keep the men's spirits up, but also to keep the rhythm of the work. In this way the 14 men would work together avoiding muscle strain.

Now the instructor should continue discussing "Steel Layin' Holler" matching the tasks of the song to the physical demands. Not all physical demands have been written on the chalkboard.

Through a close examination of "Steel Layin' Holler" the others will be discovered. To help, ask if all the physical demands of this song are on the chalkboard.

Possible response:

"Pushing with the legs" should be added to the list.

Ask why it should be added.

Possible response:

That is part of "...up, high," - of lifting the rail, expecially if it weighs two tons.

Ask if there are any other physical demands for "..up, high.."

Possible response:

Yes, flexing the wrists while changing the position of the rail in the hand.

At this point one of the learners will demonstrate to the class, the technique for lifting a great weight.

The following is a list of the physical demands and the tasks which they describe from "Steel Layin' Holler":

Physical Demands	Tasks
Bending of the back—	"Bow down."
Squatting with the feet flat on the floor—	" "
Grasping of the rail with hands	(implied)
Pulling with the arms—	"up, high,"
Pushing with legs—	
Lifting a great weight—	" "
Flexing wrist while changing position of great weight—	" "
Holding great weight with arm and shoulder strength—	" "
Walking with great weight	(implied)
pushing (heaving) with the arms—	"throw 'way."

SUPPLEMENTAL ACTIVITY
(Continued)

After fully discussing this song, the instructor should choose a learner to write these physical demands on the 2" x 8" strips and the occupation of this song on a 2" x 8" strip. These will be mounted on the bulletin board. Then the instructor may go on to the next choice.

JOE MAGARAC-MAN OF STEEL

Many years ago, when the steel industry was growing, the immigrants from Hungary moved into the Monongahela Valley and made steel production their life's work.

Among them was a man whose pleasure and woe it was to be the father of the most beautiful daughter in the whole valley. It was his wish that this lovely young lady marry only the most worthy man. Since he worked in the steel mills, he knew that the best men, and fellow country men, came from the mill.

In order to determine which was the most eligible, father decided to give a big picnic. He invited the men from the mill, saying that the bachelors would participate in a test of strength. There would be three barbells. As father introduced the contest, he said to the competitors and those watching,

"Anyone who can't lift up the little bar can go and play with the children. Everyone who lifts the little one may try the middle bar. Those who cannot lift the middle one can go and sit on the bench with the women.

"The men who lift the middle bar may try the large bar. The man who can lift the large bar will marry my daughter, Mary." Mary was dressed in the finest and most colorful gown, and seated on a platform, next to her father and mother.

Among the contenders were two men from the neighboring steel mill. Everytime it came their turn the crowd would hiss and boo. But the first bar presented no problem. The second bar was also easily lifted.

Finally, the men approached the last and heaviest bar. Now there were only three men from their mill, and the two outsiders.

The first man came up to the bar, looked at it, spit on his hands and bent to pick up the bar. He strained until his face was red. So great was the effort that when his hands slipped he was sent sprawling into the crowd. The second and third had no luck either. Next came the outsiders. The first man lifted until it seemed his eyes would pop out. The weight did not budge. The last man came forward, If he could lift the bar he would be Mary's husband. He walked up to the bar and looked at it for a moment. Then he went to the table, took a long drink of Applejack, and returned to the weight. He bent down, took hold of the bar, bunched the muscles of his arms and shoulders and tried to lift the weight. It didn't move.

From the back of the crowd a loud laugh shattered the silence. A stranger stepped into the center, like no one had ever seen before. He was tall, with broad shoulders, a thick neck, and huge arms. And he seemed to glint silver in the sun.

He picked up all three weights and this last man as if he were picking wildflowers. The crowd gasped and fell back, while the stranger laughed.

Mary's father came and shook the stranger's hand. "How strong you are!" he exclaimed. "I have never seen anyone lift all three bars, and a big man besides, at the same time. You are the best man for my Mary. You will be her husband." The stranger smiled as he put down the man and the weights. "Mary is very pretty," said the stranger, "but she would not want me for a husband. My name is Joe Magarac. I'm a working man." At the mention of his name, the people roared with laughter. Magarac, in Hungarian, means "jackass mule."

Joe smiled to the crowd and explained, "I come from the heart of Ore Mountain. I need only to work and eat. Like my name says, I'm a working man, not a family man. Let Pete be Mary's husband. I think I saw Mary smile when Pete came to lift the weight."

And so it was that Joe Magarac came to the steel mills. He stood at his open-hearth furnace 24 hours a day, seven-days a week. He never left it. When it was time to try the molten steel, instead of using the long testing rod, as others did, Joe simply dipped his hands into it and cupped out a sample. Joe worked so long and hard at being a steel man that the amount of steel the mill produced rose quickly.

One day the foreman of the mill came by and told Joe that because the mill had been doing so well, it would be able to shut down for the week-end.

"Shut down?" Joe said, heart broken. "But I must work." "Sorry, Joe, the next shipment of ore won't be in until next week. We have to shut down. Let your furnace die to low so it won't be cold." The foreman left to tell the next furnace operator.

SUPPLEMENTAL ACTIVITY
JOE MAGARAC-MAN OF STEEL
(Continued)

Monday morning no one could find Joe Magarac. Someone else was operating his furnace. The foreman came by as a ladle was being taken from Joe's furnace,

"Joe, where are you?"

"I'm here, "shouted Joe. The foreman turned and saw Joe up to his shoulders in molten steel, smiling his heart's content. "Boss, called Joe, "this steel will be the best this mill has made. Use it to build the best mill in the Monongahela Valley." By the time he had finished talking to the foreman, he had melted completely. But once in awhile a deep laugh would rumble from the merrily bubbling steel of Joe's furnace. The steel of the furnace where Joe was would be the best of any mill in the valley.

Possible physical demands:

*1. Grasping with the hands
*2. Bending of the back
*3. Pulling up with the arms
4. Pushing with legs (while lifting)
5. Holding back in an upright position
6. Bending of the knee
7. Putting one foot in front of the other
8. Shifting of body weight from one side to other (in walking)
9. Reaching out with arm
10. Pulling arm toward body

*Instructor will write these on the chalkboard.

SUPPLEMENTAL ACTIVITY (Continued) Lesson 2

The instructor should write only those physical demands which are starred on the chalkboard. Also add the 2" x 8" title to the bulletin board.

The instructor should briefly explain that Joe Magarac was created by immigrants who had just come over from the "old country" and who needed a super human hero to console them in their poverty. The instructor should ask what occupation this story describes.

Possible response:

Steel man

Then continue discussing Joe Magarac, Man of Steel matching the tasks of the story to the physical demands. Not all the physical demands have been put on the chalkboard. Through a close examination of the story the others will be discovered. To help, ask if all the physical demands of this story have been put on the chalkboard.

Possible response:

"Holding back in upright position," should be added to the list.

Ask why it should be added.

Possible response:

That is part of "sit--with the women."

Ask if there are any others that should be added.

Possible response:

Yes, "reaching our with the arm"

Again, ask why.

Possible response:

It is part of "dipping in and cupping out a sample."

The following is a list of physical demands and the tasks which they describe form Joe Magarac - Man of Steel:

Physical Demands	Tasks
Grasping with the hands	"..lift.."
Bending of the back	"
Pulling up with the arms	"
Pushing with legs-(while lifting)	"
Holding back in an upright position	"...Sit..."
Bending of the knee	"
Putting one foot in front of the other	(walking assumed) "..approached.."
Shifting body weight from one foot to the other	(walking assumed) "..approached.,"
Reaching out with the arm	"...dipping in..."
Pulling the arm-and its load-toward the body	"...cupping out..."

After fully discussing this story, the instructor should choose a learner to write these physical demands on the 2" x 8" strips and the occupation of this tale on a 2" x 8" strip. These will be mounted on the bulletin board. Then the instructor may go on to the next choice.

THE RAILROAD CARS ARE COMING

1 The great Pacific railway,
  For California hail!
Bring on the locomotive,
  Lay down the iron rail;
Across the rolling prairies
  By steam we're bound to go,
The railroad cars are coming, humming
  Through New Mexico,
The railroad cars are coming, humming
  Through New Mexico.

2 The little dogs in dog-town
  Will wag each little tail;
They'll think that something's coming
  A-riding on a rail.
The rattle-snake will show its fangs,
  The owl tu-whit, tu-who,
The railroad cars are coming, humming
  Through New Mexico,
The railroad cars are coming, humming
  Through New Mexico.

Possible physical demands:

- *1. Bending of the back
- *2. Lifting up with the arms
- 3. Pushing up with the arms
- *4. Grasping with the hands plus demands that go with laying rails. "Steel Layin' Holler"
- *5. Continuing these activities across the United States

*Instructor will write these on the chalkboard.

The instructor should write only those physical demands which are starred on the chalkboard. Also add the 2" x 8" strips with the title on it to the bulletin board.

The instructor should briefly explain the background of "The Railroad Cars are Coming," asking first what occupation this song describes.

Possible response:

Railroad man

This song is a description of the task of building a railroad across the western half of the United States. The basic task was the laying of the rail itself, but ways had to be made to lay the tracks which included:

Leveling of the land
Cutting through forest
Building of trestles (trestles are bridges for trains)
Tunneling through hills or mountains
Hauling food for the workmen
Hauling ties where no trees grew...
...and so on.

This is when some of the great bison herds were massacred to feed many men on the work gang. Many of the first telegraph lines were put up at this time as the only communications between the group in the middle of the wilderness and the nearest civilization they had passed.

In "The Railroad Cars are Coming," the pride and some of the urgency of getting to California comes through. The song ignores the hardships of the labor with one thought - getting to California first.

Now the instructor should continue discussing "The Railroad Cars are Coming," matching tasks of the song to the physical demands. Not all the physical demands have been listed on the chalkboard. Through a close examination of "The Railroad Cars are Coming," the others will be discovered. To help, ask if all the physical demands of this song are on the chalkboard.

Possible response:

Pushing with the legs (while lifting a great weight)

Ask where this physical demand is indicated.

Possible response:

The song mentions "Lay down iron rail." That is part of laying rail, as the "Steel Layin' Holler" described it. Any of the physical demands of "Steel Layin' Holler" are acceptable here.

Ask if there are any other physical demands listed in the song.

Possible response:

Since there is space mentioned - "Across the rolling prairies" the workmen must continue to do the same tasks for quite a long time, which could be its own physical demand.

The following is a list of the physical demands and the tasks which they describe from "The Railroad Cars are Coming.":

Physical Demands	Tasks
Bending of the back—	"Lay down the iron rail"
Bending of the back—	"Bow down."
Squatting with feet flat on the floor—	" "
Grasping of the rail with hands—	(implied)
Pulling with the arms—	"up, high,"
Pushing with the legs—	" "
Lifting a great weight—	" "
Flexing wrist while changing position of great weight—	" "
Holding great weight with arm and shoulder strength—	" "
Walking with great weight—	(implied)
Pushing (heaving) with the arms—	"throw 'way."
(the above from "Steel Layin' Holler")	
Continuing the above labors for a long period of time—	"The great Pacific railway, For California hail!"

After fully discussing this song, the instructor should choose a learner to write these physical demands on the 2" x 8" strips and the occupation of this song on a 2" x 8" strip. These will be mounted on the bulletin board. Then the instructor may go on to the next choice.

CASEY JONES

One gray night, while I was out for a walk along the railroad tracks, I chanced upon a stranger. Tall he was, at least 6 foot 4 and blessed with hair so red it almost shone in the rainy mist. He walked along awhile, silent by my side. Finally I asked, by way of conversation, "And who might you be?" He answered in a hushed voice, "David Jones I was christened, but me friends call me Casey. I was born in Cyace, Kentucky, you see."

I said nothing, having nothing to say. We walked silently on. I took out my pocket watch. It read eleven o'clock. I said so. The stranger looked at me and said, "You know, this stretch of track is very familiar to me. Ya might say, it was a turning point in me life." "Oh," I commented, surprised that he had said so much. "How is that so?" I asked. "Let me tell you a story. It's about an engineer I knew very well."

"It was a rainy evenin', much like tonight it was, that the engineer pulled in at 11 p.m., after his normal run. The Chief was there waitin' for the man. He said the next engineer had been sent home sick. My friend said, without a moment's hesitation, 'Me and my fireman will take the engine back'." "The fireman had been stoking the engine till his arms felt like lead. It was the best speed that engine had ever seen. The engineer was showing all his pearly whites, he was that proud."

"Now there's a stretch o' track that has a side track where the slow freights wait, lettin' the fast trains go by. On this night there were two trains that had to pass a freight train. The freight was so long that it didn't fit completely onto the side track. The freight had to nose out onto the main track while the fast train got by the caboose. Then it had to back up so the tail was on the main track while the express passed the engines."

"This was the situation when my engineer friend and his fireman came through the misty fog of midnight. He saw the caboose on the main track as he rounded the bend and knew his end had come. 'Jump, Joe.' I'll be dying for the both of us!' At that he pushed his fireman out the door and did the only thing he could do. He threw the engine into reverse and leaned on the air brakes. The last thing heard was the long plaintive whistle that was his trademark, followed by a thunderous crash."

SUPPLEMENTAL ACTIVITY
CASEY JONES
(Continued)

Lesson 2

I considered the tale for a moment, "And did your friend live through it?" "No, man, his spirit left his body that night. No one knows what happened after the man threw his fireman out the door."

I could hear a long low train whistle far away but drawing nigh, as I mulled over this last statement. "But, stranger, if no one knows what happened, how is it you can tell me?"

"Why, friend, don't you know? The engineer in that accident was Casey Jones."

"But, that's you."

The stranger smiled and vanished into the misty night as the train whistle called plaintively through the dark.

Possible physical demands:

*1. Grasping with the hands
*2. Pulling back with hands, arms, and shoulders
*3. Pushing down with hands, arms and shoulders
4. Staying awake long hours
*5. Lifting many weights with hands and arms
6. Throwing or tossing many weights
7. Bending the back many times
8. Facing great heat
9. Shoving with hands and arms

*Instructor will write these on the chalkboard.

The instructor should write only those physical demands which are starred on the chalkboard. Also, add the 2" x 8" strip of the title to the bulletin board.

The instructor should ask what occupation this story describes.

Possible response:

Engineer

Then briefly explain that Casey Jones was a train engineer when the only rule was to "get in on time or don't bother getting in at all." Casey Jones was thought of as not only one of the fastest engineers, but as one of the safest. Never had he derailed a train until his fatal calamity.

The instructor should continue discussing Casey Jones, matching the tasks on the story to the physical demands. Not all the physical demands have been put on the chalkboard. Through a close examination of the story, the others will be discovered. To help, ask if all the physical demands of this story have been put on the chalkboard.

Possible response:

"Throwing or tossing many weights" should be added to the list.

Ask why it should be added.

Possible response:

It is part of stoking the fire in the engine.

Ask if there are any other physical demands.

Possible response:

Bending the back many times is a physical demand.

Ask why.

Possible response:

It is also part of stoking a engine furnace.

The following is a list of physical demands and the tasks which they describe from Casey Jones.:

SUPPLEMENTAL ACTIVITY
(Continued)

Physical Demands	Tasks
Lifting many weights with the hands and arms—	"stoking the fire"
Throwing or tossing many weights—	
Bending the back many times—	" " "
Facing great heat—	" " "
Shoving with hands and arms—	"pushed out the door"
Grasping with the hands—	"threw the engine in reverse"
Pulling back with hands, arms, and shoulders—	" " " "
Staying awake long hours	"leaning on the air brakes" (implied in after a normal run, taking the next shift)

After fully discussing this story, the instructor should choose a learner to write these physical demands on the 2" x 8" strips and the occupations of this tale on a 2" x 8" strip. These will be mounted on the bulletin board. Then the instructor may go on to the next choice.

RAGING CANAWL

Come, listen to my story, ye landsmen, one and all,
And I'll sing to you the dangers of that raging canal;
For I am one of many who expects a watery grave,
For I've been at the mercies of the winds and the waves.

I left Albany harbor about the break of day,
If rightly I remember, 'twas the second day of May;
We trusted to our driver, altho' he was but small,
Yet he knew all the windings of that raging canal.

It seemed as if the devil had work in hand that night.
For our oil it was all gone, and our lamps they gave no light;
The clouds began to gather, and the rain began to fall,
And I wished myself off of that raging canal.

The Captain told the driver to hurry with all speed,
And his orders were obeyed, for he soon cracked up his lead;
With the fastest kind of towing we allowed by twelve o'clock,
We should be in old Schenectady, right bang against the dock.

But sad was the fate of our poor devoted bark,
For the rain kept a-pouring faster, and the night it grew more dark,
The horses gave a stumble, and the driver gave a squall.
And they tumbled head and heels into that raging canal.

The Captain came on deck, with a voice so clear and sound,
Crying, "Cut the horses loose, my boys, or I swear we'll all be drowned!"
The driver paddled to the shore, altho' he was but small,
While the horses sank to rise no more in that raging canal.

The cook she wrung her hands, and she came upon the deck,
Saying: "Alas! what will become of us, our boat it is a wreck?"
The steersman laid her over, for he was a man of sense,
When the bowsman jumped ashore he lashed her to the fence.

We had a load of Dutch, and we stowed them in the hole,
They were not the least concerned about the welfare of their soul;
The Captain went below and implored them for to pray,
But the only answer he could get was, "Nix come rous, nix fis staa."

The Captain came on deck with a spyglass in his hand,
But the night it was so dark he could not diskiver land;
He said to us with a faltering voice, while tears began to fall,
"Prepare to meet your death, my boys, this night on the canal."

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SUPPLEMENTAL ACTIVITY
RAGING CANAWL
(Continued)

Lesson 2

The cook, she being kind hearted, she loaned us an old dress,
Which we raised upon a setting pole as a signal of distress;
We agreed with restoration, aboard the boat to hide,
And never quit her deck whilst a plank hung to her side.

It was our good fortune about the break of day,
The storm it did abate, and a boat came by that way;
Our signal was discovered, and they hove alongside.
And we all jumped aboard and for Buffalo did ride.

I landed in Buffalo about twelve o'clock,
The first place I went to was down to the dock;
I wanted to go up the lake, but it looked rather squally,
When along came Fred Emmons and his friend, Billy Bally.

Says Fred, "How do you do, and whar have you been so long?"
Says I, "For the last fortnight I've been on the canal;
For it stormed all the time, and that was the devil to pay.
When we got in Tonawandy Creek we thar was cast away."

"Now," says Fred, "Let me tell you how to manage wind and
  weather,
In a storm hug to the towpath, and then lay feather to
  feather;
And when the weather is bad, and the wind it blows a gale,
Just jump ashore, knock down a horse—that's taking in a sail.

And if you wish to see both sides of the canal,
To steer your course to Buffalo, and that right true and well,
And it be so foggy that you cannot see the track,
Just call the driver aboard and hitch a lantern on his back."

Possible physical demands:

1. Starting work at dawn
2. Flexing the wrist
3. Extending the arm
*4. Kicking legs up and down quickly
*5. Extending each arm alternately and drawing it to the body
6. Twisting of one hand in the other
*7. Alternating reaching each hand up and pulling down with the arms
*8. Jumping with the legs

*Instructor will write these on the chalkboard.

The instructor should write only those physical demands which are starred on the chalkboard. Also, add the 2" x 8" strip titled "Raging Canawl" to the bulletin board under "Folk Songs."

The instructor should briefly explain the background of "Raging Canawl" asking first what occupation this song describes.

Possible response: canal man

At the beginning of American prosperity, canals were some of the cheapest, if not the best ways to get goods to market. A barge, or bark, was a flat-bottomed boat that didn't sink very far into the water. These were the vessels that navigated on canals. They were pulled by horses, mules, or oxen on the shore by lines attached to the bark. In times of storm, shallow water can be more violent than the ocean for those things afloat on it. This is the situation in "Raging Canawl."

A few terms may need to be explained:

Verse 4: "cracked up his lead" - whipped his lead animal into action

Verse 7: "laid her over" - steered the ship to the side to stop its progress

Verse 8: "stowed them in the hole" - made them stay below the deck

Verse 9: "diskiver" - discover

Verse 10: "never quit her deck" - never left the ship

Verse 13: "cast-away" - the ship went down beneath them

Now the instructor should continue discussing "Raging Canawl," matching the tasks of the song to the physical demands. Not all the physical demands have been listed on the chalkboard. Through a close examination of "Raging Canawl" the others will be discovered. To help, ask if all the physical demands of this song are on the chalkboard.

Possible response: flexing the wrist

Ask why.

Possible response:

That is part of "...cracking up the lead;"

Ask if there are any other physical demands listed in the song.

Possible response:

Starting the work day at daybreak

Ask where that is listed in the song.

Possible response:

"I left Albany harbor about the break of day."

The following is a list of the physical demands and the tasks which they describe from "Raging Canawl":

Physical Demands	Tasks	
Starting work at dawn —	Verse 2:	"left Albany about break of day,"
Flexing the wrist—	Verse 4:	"cracked up"
Extending the arm—	Verse 4:	"cracked up"
Kicking legs up and down quickly	Verse 6:	"paddled"
Extending each arm alternately and drawing it to the body—	Verse 6:	"paddled"
Twisting of one hand in the other—	Verse 7:	"wrung"
Alternately reaching up and pulling down with the arms—	Verse 10:	"raised"
Jumping with the legs—	Verse 11:	"jumped"

After fully discussing this song, the instructor should choose a learner to write these physical demands on the 2" x 8" strips and the occupation of this song on a 2" x 8" strip. These will be mounted on the bulletin board. Then the instructor may go on to the next choice.

STORMALONG

Long ago, sailors had the job of supplying the country with everything that could not be grown. Among the ranks of seamen there was one of great stature who was dedicated to the sea. He didn't know it until after a little experiment, but Stormalong was always a stubborn fellow.

Before he discovered it, he was signed on *Lady of the Sea* or some such ship. *Lady of the Sea* was a whaling vessel. It was heading to port after three years and seven months at sea. The men were happy to have a hold full of whale oil.

They had just finished with their last whale and were ready to weigh anchor. The men picked up the line and heaved; the anchor would not move.

"Aw' right men," the mate yelled, "Put your backs into it!"

The men grabbed the rope and pulled with all their might. The anchor held fast to the bottom.

"Sir, she's stuck fast to the bottom."

"I guess we'll have to cut ourselves free from her," answered the mate.

"Wait!" Stormalong was striding up to the mate. "I'll go down and set her free." With that statement, Stormy jumped over the side and into the murky depths. He'd been down for ten minutes. The men were starting to get worried as they lined the rail and stared at the anchor line.

"Stormy's been down full fifteen minutes now. Think we'll ever see him again?" mumbled one of the crew. A few minutes later Stormalong's head popped to the surface. A great roar went up from the crew as they welcomed him.

"Throw down the ladder," shouted the boatswain, but by the time the ladder was in place, Stormy had already climbed up the anchor line.

"She's free now, Sir," reported Stormalong.

"What was the problem, lad?" asked the captain, who had become interested in the situation.

"An octopus was holdin' her down."

"We thought you were a goner, Stormy," added a sailor, "How'd ya get on with the 'pus?"

"I just tied his arms in knots," Stormy answered, as if it were his daily chore. The men all smiled and clapped him on the back. Stormy was never one to boast.

Not long after, *Lady of the Sea* put into port. Much to everyone's surprise, Stormy did not sign on again.

"But, Stormy, where ya bound?"

"Dirt farmin'," Stormy answered simply.

"Dirt farmin'! Not a sailor like you, Stormy!" came the astonished reply.

"Yessir, I'm tired of the sea, so I thought I'd try a little farmin'."

"Well, if you decide to come back, and we're in port, you're welcome on *Lady*."

"Thank you, Sir."

So Stormy left for the fields. About three years later a tall, thin stranger came down to the wharf, lugging his gear. One of the old mariners who had retired, was sitting in front of *Lady of the Sea* as the stranger came up, dropped his gear, and stared at the ship. He stood and looked for a long minute. Finally the old mariner broke into his reverie.

"Ya know, lad, you remind me some of a sailor who used to sign on this ship. But he was a brawny lad and bronzed from sun and sea. 'S name was Stormalong. Maybe you hear'd o' him?"

"That's me!" was the reply.

"Well, I'll be a ...! But what happened to ye, lad? Ye be thin and white as a ghost. And where's yer form?"

"I'll tell you while I'm signing on." Stormy climbed the gangplank with the mariner at his heels. As Stormy was signing, the mariner went among the crew on board with the news that Stormy was back. As Stormy finished signing and turned to pick up his gear he faced a crowd of cheerful welcomes.

"Stormy, tell us about farmin' and how you come to look so ter'ble."

"Well, like I told you, I went to farm. I bought me some acres and planted potatoes, and beets, and the like. But it was too hot, and you have to push a plow instead of pulling it. There's no wind in farmin', just little breezes that barely ruffle the hair, and there's no water 'cept in the well. All ya see is trees and grass. Finally it was too lonely. I sold the farm, and here I am."

The members of the crew all nodded their heads knowingly, and then, with Stormy in their midst, went about their chores.

It didn't take long before Stormy was back in good shape. The salt spray, the sun, and being able to stretch his muscles climbing in the yards or up to the crow's nest was just what he needed. Stormy seemed to thrive on ship's duty. He was happy as long as his was the biggest ship on the seas.

One day, while *Lady of the Sea* was making for whaling grounds, the crew was forced to take in sail to let a ship called *Courser* pass. It took nearly five hours for the whole ship to get by, and she must have been doing at least twenty knots. Well, Stormalong was over the side in a flick of the eye. Plainly *Lady* was a minnow by comparison.

The *Courser* was larger than any ship imaginable. Its masts were so high, the captain had to use a telescope to see how the topsails were. It's rumored the sails had to be sewn in the Sahara Desert. That was the only place with enough room. Any crew that took topsail duty lived in a bunkhouse built on top of the main yard, and didn't come down except at the end of tour. The watch was mounted on horses so the whole deck could be covered in one night.

Needless to say, *Courser* was too large for any harbor. Goods and crew had to be transported out to it. One time a terrible hurricane came up, and though most storms don't disturb *Courser*, this one was ferocious. It was cloudy and foggy so that no one could get bearings for weeks. *Courser's* captain was afraid the ship might knock Ireland into Great Britain. Finally the hurricane blew itself out. The fog and clouds cleared, and the captain was able to pinpoint his location. After much refiguring he whispered, "*Courser* is in the North Sea. How did we get here? And how will *Courser* get out?"

The width of *Courser* is so great that the captain feared she would not fit through the English Channel. But there was not enough room in the North Sea to turn around, so there was no choice. Everyone in the crew was told to take safety precautions. Then the ship began the ticklish trip with Stormy at the helm. He was the only one tall enough to see both sides of the ship. *Courser* made it through, thanks to Stormy, but the squeak was so narrow that the crew voted unanimously to make for the South Pacific. There she is today, racing across the sea, all her sails billowing, Stormy at the helm.

Possible physical demands:

1. Pulling with arms and shoulders
2. Grasping with the hands
3. Pushing off with legs
*4. Holding breath a long time
*5. Kicking quickly with legs
*6. Cupping hands and alternately pulling toward body with each hand
*7. Reaching out alternately with each hand and pulling with hands, arms and shoulders
8. Pushing with legs, arms, and shoulders
9. Bending the back
10. Bending at the waist over a beam
11. Reaching out with hands and pulling back cumbersome weights

*Instructor will write these on the chalkboard.

The instructor should write only those physical demands which are starred on the chalkboard. Also add the 2" x 8" strip with the title to the bulletin board under "folk tales."

The instructor should ask what occupation this story describes.

Possible response: sailor

Then briefly explain that Stormalong was the sailors' hero when the basic means of export and import was by sea. Whale oil was the chief means of lamp fuel before kerosene was used, so whaling, in particular, was very important. The man who was the crew's idol could do everything easily and well. That was Stormalong.

The instructor should continue discussing Stormalong, matching the tasks of the story to the physical demands. Not all the physical demands have been put on the chalkboard. Through a close examination of the story the others will be discovered. To help, ask if all the physical demands of this story have been put on the chalkboard.

Possible response:

Pushing with the legs, arms, and shoulders should be listed.

Ask why it should be added.

Possible response:

Those are the physical demands of plowing.

Ask if there are any other physical demands.

Possible response:

Bending at the waist over a beam should be listed.

Ask why.

Possible response:

That is one of the physical demands of taking in the sail

SUPPLEMENTAL ACTIVITY (Continued

Lesson 2

The following is a list of physical demands and the tasks which they describe from "Stormalong":

Physical Demands	Tasks
Pulling with arms and shoulders—	heaved
Grasping with the hands—	picked up
Pushing off with the legs—	jumped
Holding breath a long time—	(implied in)
Kicking quickly with legs—	"into murky depths"
Cupping hands and alternately reaching out and pulling toward body—	"into murky depths"
Reaching out alternately with each hand and pulling with hands, arms, and shoulders—	climbed
Pushing with legs, arms, and shoulders	push a plow
Bending the back—	planted
Bending at the waist over a beam—	take in the sail
Reaching out with hands and pulling back cumbersome weights—	take in the sail

After fully discussing this story, the instructor should choose a learner to write these physical demands on the 2" x 8" strips and the occupation of this tale on a 2" x 8" strip. These will be mounted on the bulletin board. Then the instructor may go on to the next choice.

THE SHANTY-MAN'S LIFE

1 Oh, a shanty-man's life is a wearisome life, although some think it void of care,
Swinging an ax from morning till night in the midst of the forest so drear.
Lying in the shanty bleak and cold, while the cold, stormy, wintry winds blow,
And as soon as the daylight doth appear, to the wild woods we must go.

2 Oh, the cook rises up in the middle of the night, saying, "Hurrah, brave boys, it's day."
Broken slumbers ofttimes are passed as the cold winter night whiles away.
Had we rum, wine, or beer our spirits for to cheer as the days so lonely do dwine,
Or a glass of any shone while in the woods alone for to cheer up our troubled minds.

3 But when spring it does set in, double hardships then begin, when the waters are piercing cold,
And our clothes are dripping wet and fingers benumbed, and our pike-poles we scarcely can hold.
Betwixt rocks, shoals and sands give employment to all hands, our well-banded raft for to steer,
And the rapids that we run, oh, they seem to us but fun, for we're void of all slavish fear.

4 Oh, a shanty lad is the only lad I love, and I never will deny the same.
My heart doth scorn these conceited farmer boys who think it a disgraceful name.
They may boast about their farms, but my shanty-boy has charms so far, far surpassing them all,
Until death it doth us part he shall enjoy my heart, let his riches be great or small.

SUPPLEMENTAL ACTIVITY
THE SHANTY MAN'S LIFE
(Continued)

Lesson 2

Possible physical demands:

1. Grasping with the hands
*2. Moving a small weight back
*3. Pulling a small weight down fast with arms and shoulders repeatedly
*4. Balancing on a moving object
*5. Enduring great cold

*Instructor will write these on the chalkboard.

The instructor should write only those physical demands which are starred on the chalkboard. Also, add the 2" x 8" strip titled "The Shanty-Man's Life" to the bulletin board under Folk Songs.

The instructor should briefly explain the background of "The Shanty-Man's Life" asking first what occupations this song describes.

Possible response:

Logger

"The Shanty-Man's Life" is a song about life as a lumberjack. Most of the lumbering took place in the north - Minnesota, Wisconsin, Washington, Idaho, and points north. The huge pine trees were cut, trimmed and dragged to the nearest stream or loaded on a sled, which took the logs to the river. The logs would be floated down stream to the saw mill which was usually next to a sizeable lake. Logging went on year-'round, but the busiest time was spring. The ice which blocked streams and rivers melted. Logs stacked there from the winters' cutting could be delivered to the mill downstream. This was a time of danger and a time for celebrating, for following delivery, the men were paid. The song touches briefly on many of these scenes.

The instructor should continue discussing "The Shanty-Man's Life," matching the tasks of the song to the physical demands. Not all the physical demands have been written on the chalkboard. Through a close examination of "The Shanty-Man's Life," the rest should be discovered. To help, ask if all [illegible] the physical demands of this song are on the chalkboard.

Possible response:

Grasping with the hands should also be there.

Ask why.

Possible response:

It is part of "Swing an ax."

Are there any other physical demands.

Possible response:

No. The rest are on the chalkboard.

The following is a list of the physical demands and the tasks which they describe from "The Shanty-Man's Life":

Physical Demands		Tasks
Grasping with the hands—	Verse 1 -	"Swinging an ax"
Moving a small weight back and up repeatedly—		" " "
Pulling a small weight down fast with arms and shoulders repeatedly—		" " "
Balancing on a moving object—	Verse 3	implied in "..raft for to steer.."
Enduring great cold—	Verse 1	"..bleak and cold.."

After fully discussing this song the instructor should choose a learner to write these physical demands on the 2" x 8" strips and the occupation of this song on a 2" x 8" strip. These will be mounted on the bulletin board. Then the instructor may go on to the next choice.

PAUL BUNYAN

Back when our country was young, and people could still not believe the seeming endless size of it, there lived a man of a size to fit the country. His name is Paul Bunyan.

They say that when Paul was born, he grew so fast that the following morning he had outgrown the house and by nightfall he had outgrown the barn. Finally the town of Paul's birth bought one of the largest ships in the Navy. This was to be Paul's crib. The town donated all its sheets and blankets for "little Paul." Luckily, by fall, he had outgrown both the crib and the blankets. In a few years Paul had finished school, quite remarkable for a lad of three, but it seemed Paul was in a hurry to do a lot of things.

Paul told his parents that he was going to leave home. "But why, Paul? We love you very much," cried his mother. "I know, mother, but I'm always afraid I'll step on you. I better go where there aren't so many people."

Paul was determined, and the next morning he was gone. He wandered westward, until he found a cave that could be his home for awhile. Pine trees stretched for miles in all directions, poking through the blanket of snow like so many green spears. At last Paul was away from people. He could walk without fear of stamping them out.

Soon Paul realized that being with too many people was bad, but having no one to keep company with was worse. Paul finally became so lonely that he began to cry as he walked. In many ways Paul Bunyan was still a "little boy." All the way across southern Canada and the northern United States Paul cried. His trail is marked by the foot prints he left, filled with his tears. Most people nowadays call them lakes.

After much wandering Paul decided he needed a partner. One day he came upon a most uproarious ruckus in the woods. The ground shook, and trees fell like toothpicks. Paul became curious at the racket and went to investigate. There, caught in some rocks and trees, was a baby ox. The strange thing about this ox was its coat. It was as blue as a winter sky. Paul saw that the little fellow was in trouble and went to help.

"Take it easy, baby ox, I will help," Paul murmured as he picked up the shaky-legged creature. When it was finally on its feet, Paul sat down on a mountain to watch as the baby ox nibbled the tree tops. When he decided to move on, the little ox followed contentedly, wagging its tail, knocking trees down left and right. Paul turned to see he was not alone anymore. He named his companion Babe, the Blue Ox, and together they walked westward.

Paul came to the best stand of pine trees he had ever seen. He had heard the people could use logs and lumber **for** houses and such, so he decided to start a logging camp. Soon after word got out, his camp was filled with more than a thousand men ready to cut trees. Paul saw that they needed a permanent camp and proceeded to build one.

The most important thing to the men was food, so Paul went to a mountain nearby and chopped a hunk out of it almost a mile wide for a griddle. The mountain was considerably higher than the camp, and as Paul was dragging it home it began to roll.

"This is much faster," thought Paul, and ran down the mountain shouting. "The griddle is coming, make way!" Between the rolling rock and Paul's bellowing shouts, the countryside was fairly hopping. The stone rolled on until it started up hill again. There it rolled back a ways and turned on its side several times, gouging out a huge hole. Finally, it came to rest on top of the hole. By rolling down the hill, the edges were smoothed out so it was now round, and the hole it dug was perfect for the fire. "It is settled. Wherever the griddle is, that is where the camp will be built," said Paul.

Time was running out, the camp had to be built before the cold weather hit. Paul pulled out trees by the bear-hug method and trimmed them for loggers. The work was done so quickly that, day or night, there was a soft glow around the camp. Within a week the camp was done, complete with bunk houses three stories high. The men had to jump, using parachutes to get down in the morning. If they took the ladder down, they would miss breakfast! The camp had a griddle so big that the batter was mixed in cement mixers The griddle was greased by cooks who strapped sides of bacon on their feet and skated around the hot surface. To turn such a huge griddle cake or flapjack, Paul set off a small charge of dynamite under one side of the griddle so the flapjack would turn in the air. Flapjacks were the men's favorite food. That's why everything was geared to making griddle cakes or flapjacks.

After the camp was set up, the men got to work. There were so many men that they had to go out in shifts so there would be enough trees for everyone to cut. Some would swing axes, some would push and pull saws. This was so that two axes would not meet mid-air and start a small forest fire.

Paul did a great lumber business - so well that all his lumber jacks retired after a few years, where most men had to work hard all their lives just to eat. Besides, Paul wanted to see the rest of the country. So he and Babe, the Blue Ox, started rambling. One time Paul Bunyan hitched a plow to Babe to see what she could do. Babe was upset, and plowed the widest, deepest furrow anyone has seen. Some folks called it the Grand Canyon.

No one has seen either Paul or Babe since that trick. They may be out there still, plowing away!

Possible physical demands:

1. Much walking
2. Lifting a great weight with arms and shoulders
3. Grasping with the hands
4. Moving a small weight back and up repeatedly
5. Pulling a small weight down fast with arms and shoulders repeatedly
*6. Pulling a great weight long distances
7. Moving the legs as in walking, but much faster
*8. Squeezing very hard
*9. Lifting up with whole body by straightening legs from bent position
10. Pushing off with legs into mid-air from a standing position
*11. Sliding on alternating feet with knees slightly bent
12. Balancing on one foot
13. Pushing with shoulders and arms
14. Pulling with shoulders and arms

*Instructor will write these on the chalkboard.

The instructor should write only those physical demands which are starred on the chalkboard. Also, add the 2" x 8" strip titled "Paul Bunyan" to the bulletin board under Folk tales.

The instructor should briefly explain the background of "Paul Bunyan": asking first what occupations this story describes.

Possible response:

Lumberjack

The story of Paul Bunyan is basically about the life of the lumberjack. Most of the lumbering took place in the north-Minnesota, Wisconsin, Washington, Idaho, and points north. The huge pine trees were cut, trimmed and dragged to the nearest stream or loaded on a sled which took the logs to the river. The logs would be floated down stream to the saw mill which was usually next to a sizeable lake. Logging went on year-'round, but the busiest time was spring. The ice which blocked streams and rivers melted. Logs stacked there from the winters' cutting could be delivered to the mill down stream. This was a time of danger and a time for celebrating,for following delivery, the men were paid. This story touches briefly on many of these scenes.

The instructor should continue discussing "Paul Bunyan," matching the tasks of the story to the physical demands have been written on the chalkboard. Through a close examination of "Paul Bunyan," the rest should be discovered. To help, ask if all the physical demands of this story are on the chalkboard.

Possible response:

"lifting great weight with arms and shoulders"

Ask why it should be listed as a physical demand.

Possible response:

It is part of picking up the baby ox.

Ask it there are any others.

Possible response:

Grasping with the hands is a physical demand.

Ask why.

Possible response:

It is part of "chopped."

The following is a list of physical demands and the tasks which they describe from "Paul Bunyan":

Physical Demands	Tasks
Much walking—	"wandered westward"
Lifting a great weight with arms and shoulders—	"picked up the baby ox"
Grasping with the hands—	"chopped"
Moving a small weight back and up repeatedly—	"
Pulling a small weight down fast with arms and shoulders repeatedly—	"
Pulling a great weight long distances—	"dragging"
Moving the legs as in walking but much faster—	"ran"
Squeezing very hard—	"bear hug" method
Lifting up with whole body by straightening legs from bent position—	" " "
Pushing off with legs into mid-air from standing position—	"jump"
Sliding on alternating feet with knees slightly bent	"skate"
Balancing on one foot—	"
Pushing with shoulders and arms—	"pushing saw"
Pulling with shoulders and arms—	" "

After fully discussing this story the instructor should choose a learner to write these physical demands on the 2" x 8" strips and the occupation of this tale on a 2" x 8" strip. These will be mounted on the bulletin board. Then the instructor may go on to the next choice.

THE OLD CHISHOLM TRAIL

Come along boys, and listen to my tale,
I'll tell you'bout my troubles on the old Chisholm Trail.

Com a ti yi yip - py, yip - py yay, yip - py yay,
Com a ti yi yip - py yip - py yay.

I woke one morning on the old Chisholm trail,
Rope in my hand and a cow by the tail.

Two-dollar horse and a forty-dollar saddle,
I could see I was ready to go punch cattle.

I jumped in the saddle and grabbed the horn.
Best durn cowboy that ever was born.

Up in the morning before daylight,
And before I sleep the moon shines bright.

Oh, it's bacon and beans most every day,
I'd just as soon eat a pile of prairie hay.

It's cloudy in the west and it looks like rain,
And my damned old slicker's in the wagon again.

It's raining like hell and it's getting mighty cold,
And these long-horned so-and-sos are gettin' hard to hold.

I herded and I hollered, and I done right well,
Till the boss he says just to let 'em go to hell.

So, I went to the boss to draw my roll,
He figured me out nine dollars in the hole.

I didn't like that so we had a little chat;
I slapped him in the face with my big slouch hat.

So I sold my rope and I sold my saddle,
'Cause I'm gettin' tired of punchin' these here cattle.

Goin' back to town to draw my money,
Goin' back home to see my honey.

I'll ride my horse to the top of the hill.
I'll kiss my gal, goldurn, I will.

My seat is in the saddle, and my saddle's in the sky;
And I'll quit punchin' cows in the sweet by and by.

SUPPLEMENTAL ACTIVITY
THE OLD CHISOLM TRAIL
(Continued) Lesson 2

Possible physical demands:

1. Grasping with the hands
2. Pushing off the ground with the legs
*3. Swinging the right leg high over an object in preparation to sitting astride it (astride means one leg on one side, one leg on the other)
*4. Keeping balance while sitting astride a moving object
*5. Moving the wrist in a constant rotation ending with a flick
6. Lifting a great weight with arms and shoulders
*7. Pulling a great weight with arms and shoulders
8. Enduring wet and cold weather

*Instructor will write these on the chalkboard.

The instructor should write only those physical demands which are starred on the chalkboard. Also, add the 2" x 8" strip titled "The Old Chisholm Trail" to the bulletin board under Folksongs.

The instructor should briefly explain the background of "The Old Chisholm Trail", asking first what occupation this song describes.

Possible response: Cowboy

This song, "The Old Chisholm Trail" is the cowboy's way of life, set to music. His was almost a 24-hour job - especially on a trail drive. The Chisholm Trail was the one most commonly used before the railways extended across the country. The drives started at the ranches mainly on the Texas range and moved north across the dry plains of Oklahoma, Kansas and then moved east to the slaughter houses. Later, when the railroad came in, Denver was the trails' end. After the cattle were sold the men were paid a year's wages. Payday was usually followed by a celebration in which most of the money was spent.

The drive north was long and hard. The cowboys were expected to be up and in the saddle by "sun-up." But before the cowboys were up the cook was up, and even before the cook, the wrangler. Wrangler was the worst job on a drive. He was in charge of the horses. He was, therefore, last to bed and first to rise of the whole camp.

Cowboys on the Chisholm Trail had many dangers to face. The first danger was the herd itself! Anything could startle the cattle into a stampede, a puff of dust, a moving branch, or the flicker of a ground squirrel's tail. A herd of frightened cattle running for all it's worth destroyed many a man and horse.

A second danger was the weather. Not only did rain and cold make life uncomfortable but rain could swell rivers to flood stage. It could make the range soggy and, in places too muddy. From rain, the weather could go to hail - which could stampede a herd - or the weather could even produce a tornado.

The opposite extreme is a drought. If there was no water for the many thirsty cattle - and cowboys - much of the herd could die on the trail, making pay less for each man.

Sometimes the drive even had to pay to go across an Indian reservation. Payment was in the form of cattle.

SUPPLEMENTAL ACTIVITY
(Continued)

This was just the drive. Life on the ranch was very similar.

The instructor should continue discussing "The Old Chisholm Trail," matching the tasks of the song to the physical demands. Not all the physical demands have been written on the chalkboard. Through a close examination of "The Old Chisholm Trail," the rest should be discovered. To help, ask if all the physical demands of this song are on the chalkboard:

Possible response:

"pushing off the ground with the legs" should be listed

Ask why it should be a physical demand.

Possible response:

It is part of jumping into the saddle.

Ask if there are any others.

Possible response:
"grasping with the hands" is a physical demand.

Again ask why.

Possible response:

That is the first step in roping.

The following is a list of the physical demands and the tasks they describe in "The Old Chisholm Trail."

Physical Demands	Tasks	
Grasping with the hands—	Verse 2	"..Rope in my hand.."
Pushing off the ground with the legs—	Verse 4	"..jumped in the saddle.."
Swinging the right leg high over an object in preparation to sitting astride it—		" " "
Keeping balance while sitting astride a moving object—		" " "
Moving the wrist in a constant rotation ending with a flick—	Verse 3	implied in "..punch cattle.."

SUPPLEMENTAL ACTIVITY
(Continued)

Physical Demands (Con't)	Tasks
Lifting a great weight with arms and shoulders—	(throwing a cow)
Pulling a great weight with arms and shoulders—	(throwing a cow)
Enduring wet, cold, or dry weather—	Verse 8 "It's raining... gettin' mighty cold.."

After fully discussing the song, the instructor should choose a learner to write these physical demands on the 2" x 8" strips and the occupation of this song on a 2" x 8" strip. These will be mounted on the bulletin board. Then the instructor may go on to the next choice.

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